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THE DECLINING BIRTH-RATE

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THE DECLINING BIRTH-RATE

ITS CAUSES AND EFFECTS

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Sir Clifford Allbutt
Dec 2993.

[*Being the Report of and the chief evidence taken by the National Birth-Rate Commission, instituted, with official recognition, by the National Council of Public Morals—for the Promotion of Race Regeneration —Spiritual, Moral and Physical.*]

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PREFACE

The origin, constitution and scope of the Commission of Inquiry into the Declining Birth-rate were set out in an article published in *The Times* on Friday, October 31, 1913, a week after the inquiry had begun. It is useful to a right understanding of this Commission and of the evidence here published, to recall some of the points of that article.

"The public," the article stated, "is accustomed to the headline in the general Press, 'The Declining Birth-rate,' and to the announcement which is made by the Registrar-General with almost mathematical regularity that 'this is the lowest rate since registration began.'"

After giving national and international figures illustrating this decline, the writer of the article continued—

"It may or may not be a good thing that fewer children have been born to occupy vacant places, so that each has more elbow-room. It may or may not be true that the quality of human life has improved *pari passu* with the decline in quantity. But, subterfuges aside, we have to recognize that the birth-rate has declined and is still declining. Whether the decline has gained such momentum that it cannot be overtaken is another and a most opportune question; but a decline which has been steady and almost persistent for thirty-seven years disposes one to the opinion that a further fall is inevitable. . . ."

Some questions and suggested explanations were made—

" Is there a general decline in fertility amongst Western civilized nations? Is the declining birth-rate an index of physical deterioration? Or why are our families smaller than they were? The marriage-rate has scarcely varied during the period under survey; the marriageable age has remained fairly constant, although later marriages are becoming the rule, especially amongst the professional classes, and the population increases, yet our birth-rate declines. All manner of explanations of this singular phenomenon come to mind—the high standard of living and greater love of pleasure, and the consequent shirking of parental responsibility; the higher education of women and their wider entrance into industrial and professional pursuits; even fear of the pains of parturition have been pressed into the argument; our alleged moral degeneration has been frequently upon the lips of preachers, whilst the view that the most worthy desire to give the fewer children born a better chance than the many had, in earlier days, is quoted with applause. Some biologists have come to the rescue with the statement that a lower birth-rate is a sign of our advance in the scale of civilization, whilst ' over-populationists ' triumphantly argue that a lower birth-rate actually increases the productive capacity of the nation. Indeed, the catalogue of explanations is limited only by the ingenuity of the makers. But when it is finally exhausted, the one question the answer to which all must dread comes uppermost: not whether the birth-rate is falling, but whether the fertility of our people is failing."

The article continued—

" In order to discover data for furnishing answers to these questions, the National Council of Public Morals, which has for its object the spiritual, moral, and physical regeneration of the race (and as its motto the felicitous

words of our King, ' The foundations of national glory are set in the homes of the people, and they will only remain unshaken while the family life of our race and nation is strong, simple and pure '), has established a Commission of Inquiry, composed of the following members—

" Rt. Rev. Bishop Boyd Carpenter, K.C.V.O. (Chairman).
The Very Rev. W. R. Inge, D.D. (Chairman).
Rt. Hon. Sir J. Gorst, LL.D. (Vice-chairman).
Dr. A. Newsholme, C.B. (Principal Medical Officer Local Government Board).
Dr. T. H. C. Stevenson (Superintendent of Statistics for the Registrar-General).
Her Grace The Duchess of Marlborough.
The Lord Bishop of Birmingham.
Lord and Lady Willoughby de Broke.
Lady Aberconway.
The Rt. Rev. The Bishop of Barking.
The Rt. Rev. Monsignor Canon W. F. Brown.
Prof. Sir J. Macdonell, C.B., LL.D.
Rt. Hon. Sir T. P. Whittaker, M.P.
Sir J. Crichton-Browne, LL.D., D.Sc., F.R.S.
Sir Malcolm Morris, K.C.V.O.
Sir. H. B. Donkin, M.D.
Rev. Principal A. E. Garvie, M.A., D.D.
Rabbi, Prof. H. Gollancz, M.A., D.Lit.
Rev. J. M. Gibson, M.A., D.D.
Rev. R. F. Horton, M.A., D.D.
Rev. F. B. Meyer, B.A., D.D.
Rev. Thos. Phillips, B.A.
Prof. G. S. Woodhead, M.A., LL.D.
Prof. L. T. Hobhouse.
Dr. Major Greenwood (Statistician to the Lister Institute).
Dr. T. B. Hyslop.

Dr. J. W. Ballantyne.
Lieut.-Col. F. Fremantle, M.D., R.A.M.C.
Dr. A. T. Schofield.
Dr. C. W. Saleeby, F.R.S., Ed.
Dr. Mary Scharlieb.
Dr. Florence Willey (Lady Barrett).
Dr. Agnes Savill.
Dr. Ettie Sayer.
Mrs. General Booth.
Mrs. Geo. Morgan.
J. A. Hobson, Esq., M.A.
A. G. Gardiner, Esq.
Walter Heape, Esq., M.A., F.R.S.
H. B. Grylls, Esq.
James Marchant, F.R.S., Ed. (Secretary).

(In view of a prolonged inquiry and of the voluntary character of the work, the Commission was made large enough to permit of the probable loss of members by illness or pressure of other labours.)

"Dr. T. H. C. Stevenson, the Superintendent of Statistics for General Register Office, and Dr. A. Newsholme, Medical Officer to the Local Government Board, have joined the Commission with the consent of the President of the Board and the Registrar-General, and whilst holding themselves free not to sign any public report, will bring the available statistical data to help the inquiry.

"The inquiry is to be made in four directions. First, the extent and character of the decline are to be considered under such headings as the present British birth-rate and infantile mortality, general and classified according to income, occupation, province and county, urban and rural, and religious (if possible); statistics showing the proportion of sterile to total marriages (to find out whether smaller families or total childlessness is the cause

of the fall); foreign statistics showing the extent of declining birth-rates, special attention being paid to France and the Jews. Secondly, the alleged causes of the decline are to be investigated, under the headings of physiological causes (for example, the effect of town life, etc., upon lateness of marriage, fertility, number of marriages), prudential motives, and methods of restraint (moral, mechanical, and chemical). Thirdly, the effects of the decline of the birth-rate, whether due to natural or artificial causes, are to be searched out, under the headings of effects upon the children, upon the man and woman, upon married people, and upon home life. Fourthly, economic and national aspects are to be dealt with, and the Commission is to consider, for instance, the alleged results of a rapid increase of population in a country where the land is fully cultivated, of a permanent surplus of workers upon the condition of the working class (in the matter of unemployment, overcrowding, etc.) in the case of a declining or stationary population, and the alleged national danger of a disproportionate increase in other nations."

The article concluded—

"A Parliamentary Committee has also been appointed in France to inquire into the national, social, and fiscal aspects of the declining birth-rate, which is presided over by M. Ribot. These two Commissions should elicit facts of the first importance. Our private Commission may not be able to do as much as a Royal Commission, but it is understood that there is no likelihood of a Royal Commission being established for a long time to come. This private Commission may, moreover, accomplish something which an official one would miss. The witnesses will feel more free to speak, it will be less formal than a Government inquiry and quite impartial."

Soon after the inquiry was commenced the Prime

Minister, Mr. Asquith, announced the fact in the House of Commons and confirmed the statement that no Royal Commission would be appointed and that the Government would await the present report with interest.

The Commission and its four sub-committees, including a Ladies' Committee presided over by Dr. Mary Scharlieb, have held many meetings during the two and a half years of their labours. They have heard many witnesses, amongst whom were—

The Lord Bishop of Southwark; The Very Rev. the Chief Rabbi, Dr. J. H. Hertz; Rt. Rev. Monsignor W. F. Brown; Rev. W. F. Lofthouse, M.A.; Sir Thomas Oliver, M.D.; Sir Francis Champneys, M.D.; Dr. T. H. C. Stevenson (Superintendent of Statistics for Registrar-General); Dr. J. C. Dunlop (Superintendent of Statistics for Scotland); Dr. C. V. Drysdale (Secretary of the Malthusian League); Dr. Major Greenwood (Lister Institute); Dr. J. Brownlee, D.Sc., F.R.S.Ed.; Dr. J. W. Ballantyne, F.R.S.Ed.; Principal D. Starr Jordan, M.S., Ph.D., M.D., LL.D. (Chancellor of Leland Stanford Jr. University); Mr. W. J. Berry (representing the London County Council Housing Committee); Dr. C. W. Saleeby, F.R.S.Ed.; Mrs. Burgwin; Mr. Winch (Secretary Guinness Trust); Mr. Peacock (Superintendent Duchy of Cornwall); Dr. Amand Routh; Dr. Mary Scharlieb; Mrs. Ring; Miss Martin; Mr. J. A. Hobson, M.A.; Dr. G. Reid, D.P.H. (representing Medical Officers' Association); Dr. A. K. Chalmers (representing Medical Officers' Association); Mr. James Robbins Holmes, and Mr. F. J. Ward.

And in addition the Commissioners have held prolonged sittings to discuss various aspects of the intricate problems arising out of the evidence tendered.

The result of their labours, in part, is here presented to the Government and the nation. The evidence was too voluminous to be published in its entirety. But nothing of importance has been deleted by the

editor.[1] Indeed, the Commission feels that the report is more valuable and readable by the necessary excisions of many questions and answers which it was impossible to avoid, but which were not strictly germane to the inquiry.

During the whole of the two and a half years the large majority of the members were able to pursue their labours on the Commission. But Sir Malcolm Morris, K.C.V.O., resigned on his appointment as a member of the Royal Commission on Venereal Diseases; and after some time Sir H. B. Donkin, Prof. L. T. Hobhouse, Dr. T. B. Hyslop, Mr. Walter Heape, F.R.S., Mr. H. B. Grylls, the Rev. Dr. Monro Gibson, and Sir T. P. Whittaker, M.P., were unable to attend; and lastly, Bishop Boyd Carpenter, K.C.V.O., after acting as Chairman for two years, and on the expiration of his office as President of the National Council and because of failing health, was, to the regret of himself and the Commission, also unable to continue. The Very Rev. Dean Inge, D.D., then became Chairman and the meetings were transferred by his generous permission to the Deanery, where it has been hospitably entertained.

The members of the Commission who have signed the Report are to be considered to have expressed their general agreement with its conclusions, without necessarily asserting their unanimity in every detail. The Note of Reservation (p. 81), and the Addition to the Report (pp. 71–80), contain additional matter which expresses the views of those only who have signed them.

We deeply regret to record that whilst this Report was being printed our Vice-Chairman, the Rt. Hon. Sir John Gorst, LL.D., passed away.

In sending forth the following Report and Evidence of the Commission, the National Council desires to place on record its most cordial thanks to the Commissioners for

[1] The task of editing the evidence was undertaken by the Secretary, in consultation with the Chairman (the Dean of St. Paul's).

their patient and long-continued labours, and to the witnesses who kindly gave evidence. The Council left the Commissioners free in every way to pursue their inquiries, and their Report is now presented to the public without alteration by the Council. The Commission is alone responsible for its Report.

JAMES MARCHANT,
Secretary to the Commission and the Council

National Council of Public Morals,
42, Great Russell Street, London, W.C.
May, 1916.

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THE DECLINING BIRTH-RATE

PART I

THE REPORT OF THE COMMISSION

Section I

STATISTICAL EVIDENCE

In this section of our report we shall present a general account of the statistical data either submitted to us in evidence or contained in published works, and it will be convenient to examine in the first place the material relating to the United Kingdom.

(1) The past increase in population of the United Kingdom is recorded in the decennial census reports. It has varied in England and Wales from 18·06 per cent. during the period 1811–21 to 10·89 per cent. in 1901–11 (*Census Report*, 1911, vol. 1, p. xi). These figures embody the combined effect of excess of births over deaths—" natural increase "—and of migration, and consequently require no correction for the latter. The best measure, however, of the net effect of migration is that obtained by deducting the actual increase in numbers at any census from the recorded excess of births over deaths during the previous ten years. As in this country there is always a balance of emigration for each complete decade, the actual increase recorded is always less than the natural increase, and the balance represents loss of population by migration. These outward balances are stated at p. xii of the report referred to for the last forty years. They vary from 601,389 in 1881–91 to 68,330 in 1891–1901. In the first ten years of the present century (April 1901 to April 1911) the loss by migration was just over half a million.

During the same period the actual increase of the English population was just over $3\frac{1}{2}$ millions.

When it is desired to estimate the population of the country and thereby its rate of increase for dates subsequent to that of the last census, the process described above has to be reversed. Instead of determining balance of emigration from the excess of natural over actual increase, we have to determine actual increase by deduction of balance of emigration from natural increase. In either case, the equation natural increase minus balance of emigration equals actual increase, holds good for a country of emigration such as our own. Natural increase may be taken as a known quantity, within narrow limits of error, the information being derived from the birth and death registers, so if the balance of emigration since the date of the last census can be ascertained, the population of the country at any given date is known. It is by this method that the Registrar-General hopes in future to frame his estimates of the population of England and Wales as a whole, but up to the present the information as to balance of emigration from England and Wales, derived from statutory returns furnished by shipping companies to the Board of Trade, has been insufficient for the purpose. The form of the returns, however, was amended as from April 1, 1912, with a view to meeting this requirement, and it is thought that after the first year or two of their use the figures contained in them will be sufficiently accurate to warrant their employment for the estimation of population.

The defect in the former returns was largely that of not distinguishing adequately between the different portions of the United Kingdom, so for the country as a whole an estimate of its present rate of increase in population can be framed by the aid of the migration returns, which should exceed in accuracy that which would result from summation of the official estimates

of population made by the Registrars-General of England, Ireland and Scotland. Further, as very complete statistics of Irish migration are obtained by the authorities in that country, an estimate can be made for Great Britain of almost equal reliability to that for the United Kingdom, though its allotment as between England and Scotland is a matter of considerable doubt. Examination of these figures will probably suggest that the rate of population increase in the United Kingdom at the present time is considerably below that indicated by the official estimates, which are based on the assumption of a rate of increase since the date of last census equal to that experienced in the preceding decennium.

(2) The *birth-rate* as recorded in England and Wales gradually rose from 32·3 per 1000 population in 1841–45 to 35·5 in 1871–75, reaching its highest point, 36·3, in 1876, and then gradually fell to 26·3 in 1906–10, and to its lowest level (so far), 23·8, in 1912. Little stress need be laid on the rise during the earlier portion of the period covered by the records. It is of very moderate dimensions, and may be explained largely by gradual improvement of registration up to 1873, when birth registration was first enforced under penalty. There is no doubt that prior to this date an appreciable number of births escaped registration, and, judging by experience of registration in general, it is natural to suppose that improvement in this respect was a gradual process. In comparison especially with what has since occurred, the birth-rate of England and Wales from 1840–80 may be regarded as having been stationary, at about 35 per 1000 population. Since then it has declined by approximately one-third (Diagram I).

This great decline has not operated uniformly throughout the country, a fact strikingly brought out in a recent monograph by Miss E. M. Elderton (*Report on*

Diagram I. Crude Birth-Rate, 1876–1913, England and Wales.

Diagram II. Corrected Birth-Rates, 1881–1911.

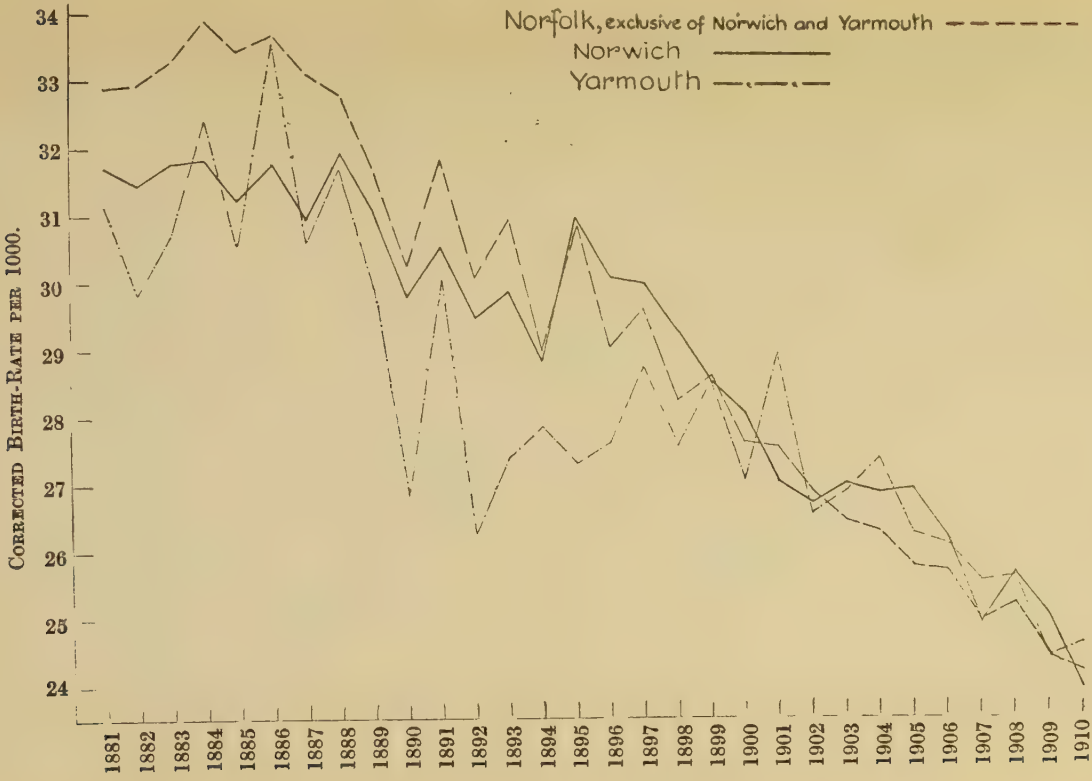

Diagram III. Corrected Birth-Rates, 1881–1910.

the English Birth-Rate, Part I, London, 1914). In this valuable publication, which deals with England north of the Humber, it is shown that the decline has been generally more marked in those districts in which a higher standard of living is found. Similar discrepancies are observed elsewhere. Thus, in the case of London, the corrected birth-rate in Hampstead, a typical middle- and upper-class residential district, fell from 30·01 in 1881 to 17·55 in 1911, while the corresponding rates for Shoreditch, a working-class area, are 31·32 and 30·16 (Diagram II). It must not, however, be supposed that the decline has exclusively affected the well-to-do classes and prosperous artisans. The fall is also marked in districts largely inhabited by agricultural labourers. Thus in the county of Norfolk, the corrected birth-rates of Norwich, Yarmouth and the whole county exclusive of Norwich and Yarmouth were in 1881, 31·71, 31·15 and 32·89. In 1910 the corresponding rates were 23·97, 24·63 and 24·23; declines of 24·4 per cent., 20·9 per cent. and 26·3 per cent.; the mainly rural part of the county manifested a slightly greater decline than the city of Norwich [1] (Diagram III).

With respect to a general contrast of the rates of declines in urbanized and rural communities, alterations in classification have rendered any strict comparison impracticable; in 1911 the legitimate birth-rates in

[1] Vital statisticians employ several methods of reckoning the birth-rate, the most important are (*a*) the crude birth-rate which is 100 (or 1000) $\times \frac{\text{total number of births}}{\text{estimated mean population}}$; (*b*) the corrected birth-rate which allows for variations in the proportion and ages of married women (see Newsholme & Stevenson, *Journ. Roy. Stat. Soc.*, 1906, lxix); (*c*) legitimate birth-rate in terms of married women which is 100 (or 1000) $\times \frac{\text{total number of legitimate births}}{\text{total number of married women at ages 15–45.}}$ The second is the best measure of fertility, but the third is sufficient for many purposes. The first is the appropriate average when the object in view is to record the net result of the various factors governing reproduction.

terms of 1000 married women, aged 15–45, were for County Boroughs 195, for London 199, Urban Districts 192 and Rural Districts 204; so that the fertility of County Boroughs was about 95·6 per cent. of that of Rural Districts. No similar figures are tabulated for earlier years; but if we contrast " Urban " Registration Counties (Glamorgan, Lancs, London, extra-Metropolitan Middlesex, Monmouth, Northumberland, Notts, Staffs, Warwick, East and West Ridings of Yorkshire) with " Rural " Registration Counties (Bucks, Cambs, Cornwall, Hereford, Hunts, Lincs, N. Wales, Norfolk, Oxford, Rutland, Salop, Somerset, S. Wales exclusive of Glamorgan, Suffolk, Westmoreland, Wilts) the rates were in 1881, 282 and 289 respectively, the " urban " rate being 97·6 per cent. of the " rural " rate. In 1911 the corresponding rates (for administrative counties with associated county boroughs) were 199·5 for the urban group, and 196·9 for the rural, so that the decline in fertility as thus stated has been somewhat greater for the rural than for the urban counties. The main lesson, however, to be derived from these figures is the uniformity, broadly speaking, of the decline in town and country alike.

A Comparison of Towns in which Prevailing Industries Differ

We now turn to consider the features of the English birth-rate at the present time in its relation to social status. We have already seen from the investigations of Miss Elderton and the marked differences between the birth-rates of such districts as Hampstead and Shoreditch that variations in the birth-rate are associated with variation of social status. In this connection, too, reference should be made to Dr. Heron's study of the London Boroughs (*On the Relation of Fertility in Man to Social Status*, London, 1906). From the point of view of the national statistics, the available material

is presented in the Reports of the Registrar-General for 1911 and 1912, and in the third volume of the Report on the Census of Scotland, 1911. The report on the Census data respecting fertility in the case of England and Wales is unfortunately not yet issued. The Registrar-General for England and Wales has, however, provided figures showing the births in 1911 classified according to the occupation of the father. Classifying into groups arranged in descending order of social grade we have—

Social class	Births per 1000 married males aged under 55 years including retired
1. Upper and Middle Class	119
2. Intermediate	132
3. Skilled Workmen	153
4. Intermediate Class	158
5. Unskilled Workmen	213

The rate of mortality in the first year of life is also provided for in these groups and follows the same order, viz. 76·4, 106·4, 112·7, 121·5, 152·5.

If, however, we multiply the birth-rates by the difference between unity and the proportion of deaths, *i. e.* the proportion of survivals in the first year, the resulting effective birth-rates are still in ascending order, viz. 110, 118, 136, 139, 181, after the hazards of the first twelve months of life are past.

We must, therefore, conclude that the initially higher birth-rates of the lower classes are not so reduced by heavier infant mortality that their effective birth-rates are brought into approximate equality with those of the wealthier classes. We have no material allowing us to extend the comparison to later years of life; but equally we have no reason to suppose that such an extension would change the order.

In the case of the Scottish Census,[1] Tables XLVII and

[1] See the evidence of Dr. Dunlop, pp. 205–216.

XLVIII record the fertilities of marriages which had lasted at least fifteen years and in which the age of the wife at marriage was twenty-two to twenty-six. From these tables it can be seen that the size of family tends to vary inversely as the social status of the parents, although the correspondence is naturally not perfect. Among occupations in which fertility is significantly greater than the general mean, we have agricultural labourers with a mean family of 6·42, general labourers with 6·29, coal, shale and ironstone miners with 7·01. Among occupations in which fertility is significantly less than the general mean are included ministers and clergymen with 4·33, schoolmasters and teachers with 4·25 and physicians and surgeons with 3·91. Without exception, professional and allied occupations are of low fertility, while the majority of labouring occupations are of high fertility (*op. cit.*, p. xxxv).

As we have said, the complete report on the census of fertility for England and Wales 1911 is not yet available; but we have been fortunate enough to obtain evidence from Dr. Stevenson,[1] and it would be convenient at this point to summarise some of the valuable information he afforded us. In addition to the tabulation of the fertility and child mortality of the whole population by full detail of combined ages of husband and wife at marriage and duration of marriage, similar tabulation, but in less detail of age and duration, has been carried out for the population classified according to (*a*) number of rooms in the tenement; (*b*) husband's occupation; (*c*) geographical area; (*d*) urban or rural nature of birth-place of both parents, and of their place of residence. The fertility of wives returned as following a gainful occupation has also been tabulated according to the wife's occupation.

Dr. Stevenson provided us with some figures relating

[1] See pp. 350–372.

to the size of tenement and the husband's occupation. In the former case, the table first submitted dealt only with marriages of less than two years' duration. Consequently, fertilities were liable to be prejudiced by ante-nuptial conception, also perhaps by wilful overstatement of duration when one or more children had been born before marriage. Similar figures were subsequently submitted regarding marriages of fifteen to twenty years' duration.

The following results may be gathered from the table—

1. The fertility for any given age of husband decreased steadily with the age of wife.

2. The fertility for any given age of wife was little affected by age of husband, but was somewhat greater for very young husbands. (Both these conclusions are borne out by the published Census of Scotland results.)

3. Fertility decreased regularly as the size of tenement increased until six or seven rooms were reached, thereafter remaining constant. In the case, however, of marriages of fifteen to twenty years' duration fertility increased with the number of rooms up to three (small families requiring little accommodation) and thereafter steadily declined.

4. Infant mortality decreased steadily as the size of the tenement increased, being for tenements of ten rooms or more less than half the average and less than one-third that in one-room tenements.

5. The saving of infant life in more comfortable tenements compensated to but a slight extent for their lower fertility.

6. There was a very definite relationship of infant mortality to age of wife. Dealing with all sizes of tenements and all ages of husbands the child mortality for wives under 20 at marriage was

104; under 25, 77; under 30, 61; under 35, 64; and under 45, 84. This statement was of general application whatever the size of the tenement.

With respect to the explanation of this variable infant mortality, Dr. Stevenson, on the basis of the tabulations relating to varying sizes of family, concluded that there was a very simple explanation of the fact that mortality decreases as the age of the mother at marriage increases up to twenty-five to thirty; viz. that the mortality of children increases with the number born in the family. It appears that for all ages of wife at marriage child mortality rises regularly in proportion to size of family, and, in the case of the earlier durations, to an extreme degree. It is natural, therefore, that for a given duration of marriage the larger family of the more fertile young wife should show a greater mortality than the smaller family of the older wife. Even, however, when the comparison is restricted to families of equal size the very young wife (at marriage) is at a disadvantage throughout, and the mother marrying at twenty to twenty-four loses more children during the first fifteen years of marriage than the woman marrying at twenty-five to twenty-nine. On the other hand, the high mortality of children of mothers marrying late in life is emphasized when size of family is taken into consideration, and is well marked at all durations of marriage.

With respect to the Occupation Tables showing fertility and child mortality for age of wife at marriage and duration of marriage, these have been constructed for the following eleven occupations : clergymen (Church of England), Nonconformist ministers, medical practitioners, teachers, farmers, carpenters, boilermakers, cotton spinners, cotton weavers, coal-miners and agricultural labourers. For the last two and the first of these

occupations rates were also calculated, distinguishing the husband's age at marriage in addition to duration and wife's age; but so little of interest resulted from this distinction that it need not be further referred to.

The first series of tables gave for the eleven occupations the number of children born and children surviving per 100 families, and the number of children dead per 1000 born in each of twenty-five groups distinguished by age of wife at marriage and duration of marriage. The tables included only women of fertile age, as they were intended to elucidate only the present state of fertility and not its past history. The age at marriage, obtained by deducting duration of marriage from census age, could only be determined within two years. Thus a woman aged 39 years (39–40) at the census and ten years married might have been any age between 28 and 30 at marriage. The average age of such women would be about 29, and the headings of the age columns in the tables referred to such average ages; the first column included wives of the average age of 19 (*i. e.* 18–20) at marriage; the second average age 20 (*i. e.* 19–21) to 24 at marriage, and so on. Hence there was a certain amount of overlapping in the age groups which would not, however, prejudice the results to any serious extent.

The tables show great differences between the occupations, for the more convenient study of which the rates of total and effective fertility (the latter term being used to signify the proportional number of surviving children) were in a second table converted into percentage form indicating their ratio to the similar rate for the total population.

Even in this form, however, the picture presented is too complex to admit of its general effect being readily summed up, and the general combined result of the various rates shown for separate sections of each occu-

pation was stated in a single figure, representing for each occupation the number of children, born and surviving respectively, which would result from the application of the rates in question to the married couples of England and Wales, distributed as the latter are over the twenty-five combinations of duration and wife's age at marriage. In this way the inequalities of age and duration between the different occupations were eliminated, and their fertilities could be compared as if the members of each had been married for equal periods to wives of equal ages. For further convenience of comparisons these results were stated in proportional form, taking the rates for the whole population as 100. We reproduce these " Comparative Family Figures," as Dr. Stevenson termed them, in the accompanying tables.

From these tables it can be seen that apart altogether from the fact that the members of some occupations are married in greater proportion and to wives of younger age than those of others, their fertility under equal conditions as to marriage differs very widely. That of coal-miners is very nearly twice that of doctors, and for the marriages offering the greatest opportunity of fertility is considerably more than twice that of doctors. The four professional occupations are grouped together at the bottom of the list, though when surviving children only are taken into account they stand higher in some cases than the cotton operatives. On the whole, however, the order of surviving families differs little from that of total families.

The first duration group results are probably affected in differing degrees by ante-nuptial conception. This will explain why the gap between, for instance, miners and clergymen is much greater for marriages of 0–2 than of 2–5 years' duration. With this exception the differences in fertility tend to become accentuated as the duration of marriage increases.

CENSUS 1911—COMPARATIVE FAMILY FIGURES

DURATION OF MARRIAGE

	All durations		0–2 yrs.		2–5 yrs.		5–10 yrs.		10–15 yrs.		15–20 yrs.		20–25 yrs.		25–30 yrs.	
	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving
General population	100·0	100·0	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Coal-miners	126·4	120·2	128	126	120	116	124	118	128	112	130	123	126	120	120	116
Agricultural labourers	113·4	119·6	123	124	115	113	115	119	114	119	115	122	110	119	105	115
Boilermakers	110·1	107·3	110	108	108	107	110	108	110	107	111	108	110	107	116	107
Farmers	100·5	109·1	95	98	107	112	108	115	101	110	98	107	94	104	85	97
Carpenters	95·3	98·7	97	99	97	99	95	98	95	98	95	99	95	100	98	100
Cotton spinners	91·9	86·7	95	91	86	83	89	84	92	86	93	87	97	91	96	96
Cotton weavers	81·2	76·9	83	80	80	78	77	73	79	75	84	79	85	81	89	81
Nonconformist ministers	79·8	85·0	68	71	92	97	81	85	79	85	76	82	79	84	92	92
Clergymen (C. of E.)	72·0	82·0	72	75	87	93	84	93	73	83	67	75	58	67	63	71
Teachers	70·3	76·1	68	70	75	79	74	80	70	76	68	74	66	73	74	80
Doctors	64·7	72·1	85	90	83	89	78	84	64	72	57	64	52	60	56	59

These data confirm the conclusions indicated by the other evidence we have already cited. No doubt further amplification will be afforded when the forthcoming volumes of the Census 1911, England and Wales, are issued; but the data already quoted amount, in our opinion, to a complete statistical demonstration that fertility is closely correlated with social status, the relation being such that the more prosperous the social class the lower is the fertility. There are also strong grounds for believing that this initial difference is not removed by subsequent differential mortality upon the offspring in favour of the more wealthy classes. A formal proof of this statement on the basis of national statistics is only available in the case of the first year of life, but it is to be remembered that it is precisely in that year that the rate of mortality is heaviest. Thus, from English Life table No. 8 (Males) (*Col.* 7512) we learn that of 1,000,000 born, 879,559 survive one year, a reduction of about 12 per cent.; the 879,559 survivors are only reduced to the same proportional extent after the lapse of twenty-six years.

We now pass to certain other factors which are claimed to be associated with variations of fertility so far as they can be studied in the case of our own country. The influence of *religious profession* has been regarded as of much importance by various writers, but our national statistics do not throw much light upon the matter, such *prima facie* differences as emerge being complicated by the coexistence in most cases of racial and social differences the effect of which may well be over-mastering.

On this subject we have taken some valuable evidence from the Chief Rabbi.[1] He pointed out that in some cities of the United States the largest family was found amongst the Jews, next to that came the Roman Catholics, followed by the Protestants, whilst the

[1] See pp. 425–436.

smallest family was found among persons with no positive religious affiliation. He also called our attention to the fact that the birth-rate of the Borough of Stepney in 1913 was 29·6 as compared with that for London as a whole of 24·5.

At the Royal Commission on Alien Immigration, it was asserted in evidence that whereas during 1886–90 the birth-rate had been falling in London, it rose during that period, owing to immigration of the poor Jews, in Whitechapel from 35·7 to 39·2; in St. Giles'-in-the-East from 39·9 to 43·3, and in Mile End Town from 37·5 to 38·2. The Chief Rabbi, however, pointed out that the Jewish birth-rate varies very greatly in different countries. In some it is higher than in Whitechapel. For instance, in Bulgaria it is 39·6; Galicia 38; Russia 36; while in others it is lower than the French birth-rate. For instance, 16·2 in Bavaria in the year 1913, while in 1906 in Breslau the Jewish birth-rate was 15·3.

As we have stated in the case of our national statistics, the influence of religious profession is complicated by the fact that usually religious profession is associated with racial differences. It will, however, be convenient to refer at this point to the changes in the Irish birth-rate. As Dr. Stevenson pointed out in his evidence before us, owing to the very great difference between the age constitution of the Irish and English populations, comparisons of crude birth-rates are misleading. Adopting a standardized or corrected rate (*vide supra*) it is found that the rate in Connaught in 1911 was 45·3 as against 24·7 for England and Wales, and the fertility in Connaught has been rising in the last few years with even greater rapidity than it has been declining in this country. The increase in Connaught has been shared by the other Provinces with the exception of Ulster, where there has been a decrease of slight extent. For Ireland as a whole the rate rises from 36·1 to 37,

while that for England and Wales was falling from 28·4 to 24·7 and for Scotland from 33·4 to 29·7.

In his evidence, Dr. Stevenson asserted that in view of such great differences in fertility within the United Kingdom it would be difficult to regard the fall in Great Britain as resulting from cyclical change in natural fertility, since in that case the phase of diminution in Great Britain has been accompanied by one of increase in Ireland. He suggested that a more natural explanation would be that artificial restraint had become more prevalent in England, as in other similarly situated countries, whereas the Irish increase represented the natural result of increased prosperity in the case of a population amongst whom the religious bar to such restraint was effective.

In this section of our report, which is confined to a recital of statistical facts, we do not propose to discuss the possible explanations.

Upon the whole we do not feel justified in drawing any very definite statistical conclusion as to the effect of religious profession.

The influence of *nationality* is, in the case of the United Kingdom, complicated by the intervention of some of the factors already noticed, and we shall only refer to it in the course of our observations respecting foreign countries.

The effect of *Education*, apart from social position, has been invoked by various writers as a factor of the declining birth-rate.

The national statistics throw no direct light upon this question and we are obliged to have recourse to private researches. Two such inquiries are relevant.

The first was undertaken by Mrs. Henry Sidgwick (*Health Statistics of Women Students of Cambridge and Oxford and of their Sisters*, by Mrs. Henry Sidgwick, Cambridge University Press 1890). It related to the post-graduate life of women students at Oxford and

Cambridge in comparison with that of non-collegiate sisters and the conclusion reached by Mrs. Sidgwick was that the figures afforded no evidence for the belief that a college education had any prejudicial effect upon the capacity of women to bear children.

We have carried out a similar investigation[1] to that of Mrs. Sidgwick, schedules being forwarded to a large number of college graduates with a request that they would record particulars relating to themselves and send a similar schedule to a sister or cousin who had not had a college education. In all 787 schedules were returned, and of these 481 related to college graduates and 155 related to non-college sisters or cousins were available for examination. The mean number of children born by the college women was 1·94, for an average duration of marriage of 8·01 years, and an average age at marriage of 27·87 years. The non-college women had a mean size of family of 2·15, a mean duration of marriage of 9·89 years and a mean age at marriage of 26·8 years. Since neither ages at marriage nor durations of marriage were the same in the two classes it was necessary to allow for these differences before the fertilities could be compared. This allowance has been made in accordance with the statistical methods adopted in modern practice, the result being that the mean size of family calculated for the non-college women on the basis of the college experience proved to be 2·29 as against the actual observed family of 2·15. In other words, making the required correction, the fertility of the non-college woman did not differ significantly from that of the college woman. A similar standardization applied to Mrs. Sidgwick's data led to the same conclusion, so that our results are in complete accord with hers; viz. there is no physiological difference between the fertilities of the two classes.

[1] This investigation and the analysis of the returns was kindly undertaken by Dr. Agnes Savill and Dr. Major Greenwood, Junr. See pp. 322–335.

Naturally these data are too scanty for conclusions drawn from them to possess the degree of certainty attaching to averages based upon national data, but they appear to us to authorize the conclusion that we are not warranted in believing that higher education has any physiological effect upon the capacity of women to bear children, although the postponement of marriage generally attendant upon the university education of women must to some extent reduce their average output of children.

Lastly, we turn to the supposed effect of (*a*) contraceptive methods, (*b*) criminal abortion. With respect to the former, the very great differences of fertility separating social classes and the markedly different rates of decline observed in wealthy and poor districts of the same town, will appear to many cogent evidence of an indirect character. Direct evidence is available in the following cases.

In 1907, Mr. Sidney Webb published the results of a voluntary census undertaken among members of the Fabian Society (The Fabian Tract, No. 131, *The Declining Birth-Rate*, by Sidney Webb, London, The Fabian Society, reprinted March 1910). The size of the experience was very small, smaller indeed than that of our own inquiry. Of 316 marriages 74 were returned as unlimited and 242 as limited. In our own census the following particulars were elicited, 481 of the college schedules were included in the present investigation, 366 of these gave definite replies, 288 of the marriages were specifically asserted to be limited, 138 were not limited and the answers of 115 were indefinite. In the case of the non-college schedules 153 were available for the present purpose, 111 gave definite replies, 61 were stated to be limited, 50 not limited, 42 were indefinite. The proportions are not quite the same in the two cases; but if we combine the two sets we see

that the minimum percentage of limited marriages is 45·6, while if we confine ourselves to the schedules giving absolutely definite replies we have 289 marriages of restricted fertility out of 477 and we find the percentage is 60·6. The proportion would naturally be higher still if we chose to regard those marriages in which this question was ignored as cases of limited fertility.

With regard to the methods adopted by those who practice limitation 203 of the schedules contained particulars, and it is of some interest to observe that of these 203, 105 or 51·7 per cent. did not make use of any chemical or mechanical contrivance, but appear merely to have restricted marital intercourse to periods when conception was generally believed to be unlikely to occur or to have abstained altogether.

These statistics are subject to the limitations noted before as pertaining to small collections of data obtained by voluntary census; but we think that they create a strong presumption that, among the middle and upper classes, conscious limitation of fertility is widely attempted. That these methods attain the end desired by those who employ them is a conclusion which is inherently probable; but we cannot offer a statistical proof of it. As a matter of fact, the average size of family is in the case of our returns greater among those who adopted conscious methods of restriction than among the others (childless marriages being excluded in both cases); but this divergence could no doubt be plausibly explained in many ways. We think that it being clear that contraceptive devices or restriction of the occasions of sexual intercourse are widely employed the existence of such customs must be presumed to have played a part in the decline of the birth-rate, and that it is unnecessary to invoke any hypothetical decline of natural fertility, a course adopted by certain witnesses before us.

Before leaving the subject of our Voluntary Census we may remark that a complete analysis of it from the statistical aspect is being carried out in the Statistical Department of the Lister Institute of Preventive Medicine, and will be published in one of the scientific journals where sources of fallacy and limitations upon the interpretation of the figures will be specifically dealt with.

Turning to the subject of criminal abortion, we would remark that Miss Elderton's inquiries point to the wide prevalence of attempts to induce abortion by means of drugs in the industrial districts of the North, and that evidence taken by us, in particular that of Sir Thomas Oliver,[1] is to the same effect. We are, however, without statistical data adequate to permit of an evaluation of the magnitude of this factor. This circumstance precludes us from dealing with the point in the present section of our report.

We may conclude the statistical examination of the facts relating to the United Kingdom by pointing out that neither variations of the marriage rate nor alterations in the average age at marriage are capable of explaining the decline of fertility. Dr. Stevenson pointed this out in his evidence before us, and the statistical demonstration will be found on page xx, *Report of Registrar General for* 1912. Here it is pointed out that the potential effect of the decreased proportion of married to total women at ages 15 to 45, would be a decline of 1·10 in the birth-rate. On the other hand, the potential effect of the increased proportion of women aged 15 to 45 in the population would be to increase the rate by 2·86. The recorded fall from 1876 to 1880 to 1912 is 11·53, so that if allowance is made for these two corrections it would appear that the decline of fertility is actually greater than that measured by 11·53 and should be measured by 13·29.

[1] See pp. 313–321.

Confining ourselves to the legitimate birth-rate for the same period, the potential decline due to the first-mentioned cause is 1·16, the potential increase due to the second-mentioned cause 2·72. The observed decline 10·87 and consequently the effect of diminution of fertility 12·43.

Another factor which has been invoked in connection with the declining birth-rate is the dissemination of the venereal diseases. Not only is it a well-ascertained clinical fact that gonorrhœal affection may cause complete sterility in both sexes, but syphilitic affection is notoriously associated with a great frequency of abortions and miscarriages. The extent of this factor is unquestionably an integral part of our inquiry; but in view of the fact that a Royal Commission is at present investigating the whole subject of venereal diseases we decided at one of our earlier meetings not to deal with that aspect of the problem under our consideration. In any case we should not be able to discuss it in this section of our report, as no trustworthy material of a statistical nature is within our reach.

Finally, we must mention the fact that various writers of more or less distinction have invoked cause groups other than those just discussed as being responsible for the declining birth-rate. It may be remembered that many years ago Michael Thomas Sadler published a book which was the object of a violent attack by Macaulay in the *Edinburgh Review*, arguing that there was an inverse relation between fertility and density of population. This has been sometimes referred to as "Sadler's Law." On the merits there is no doubt that Macaulay's criticism was to a large extent unjust, and as we have pointed out there is reason to suppose that the fertility of urban communities does fall below that of rural districts, though not invariably. At the same time, in view of the marked decline which is characterized

in nearly all types of area and population, it is evident that Sadler's principle cannot be seriously held to account for the national decline.

Again, some writers have argued that food is a factor in causing a decline of fertility, and others believe that increasing wear and tear of intellectual life are not without influence. None of these propositions has been supported by any evidence submitted to us, nor are we acquainted with any data bearing upon them elsewhere. Under the circumstances we are not called upon to do more than mention them.

The theory advanced in evidence before us by two professional witnesses deserves more consideration, not only from its intrinsic interest, but because some attempt was made to substantiate it statistically. This theory asserts that the declining birth-rate is due to cyclical variations of the natural power to conceive or procreate children, and was definitely put before us by Dr. John Brownlee,[1] Statistician to the Medical Research Committee established under the Insurance Act, and by Dr. Chalmers,[2] Medical Officer of Health for Glasgow.

The evidence upon which Dr. Brownlee relied may be grouped under two headings: (1) The declining birth-rate in Scotland was, in his opinion, too general and affected to some extent districts of too widely different characters for it to be reasonable to attribute the result to the employment of artificial means. (2) He submitted to us various estimates of the population during the past centuries tending in his opinion to support the inference that there were periods of rapidly increasing population followed by periods of decline, and that these periods of increase, characterized as he termed it by advanced germinal vitality, were those in which the production of men of genius in various fields was high.

Dr. Chalmers relied upon the following particulars: In 1828 Statistical Tables relative to the City of Glasgow

[1] See pp. 149–165. [2] See pp. 336–349.

were published by James Cleland, who was City Chamberlain at that period. It appeared from this work that in 1609 a Register of Baptisms began to be kept by order of the Session. The number thereof in the first year quoted—1611—was given as 268; in the preceding year a census of the population had been taken under the direction of the Archbishop, and was found to amount to 7,644. This suggests the crude birth-rate of the population at that time was about 35 per 1000. This ratio is also that of the year 1660, when baptisms numbered 520 and the population 14,678. Similar birth-rates were recorded during the latter half of the eighties decade of the last century. During that period the number of births per 100 marriages was 402, having been 424 during the seventies. For the early years of the eighteenth century, Dr. Chalmers provided the following table—

Year	Average annual number		Births per 100 marriages
	Births	Marriages	
1701–10	500	120	416
1711–20	576	137	416
1721–30	609	147	414

Similar records for the following decades of the eighteenth century were not obtainable; but he cited the following passage of Cleland's work: "As a remarkable proof of the inattention of parents (to the propriety of registering the names of their children), there were in the Barony Parish of Glasgow in 1832 proclamations of 575 marriages, but only 518 registrations of baptism, whereas the number of children referring to these marriages would amount to about 2000." The interest of the suggestion being in Dr. Chalmers's opinion that considerably under 400 (about 348 children per 100 marriages) was the expectation in the third decade of the last century against an actual ratio of 424 in the seventies decade, 306 in the nineties and 336 between 1901 and 1910. In any case, the number of children expected to result from a given number of marriages

in 1822 was considerably below the recorded number a century earlier and also lower than what occurred fifty years afterwards. Dr. Chalmers believed that the figures given were reasonably accurate, and that they suggested an ebb and flow of productivity over long periods associated with and aided, it may be, by economic conditions which lower the rate and postpone the age of marriage, but are primarily dependent on what might be regarded as fluctuations in germinal activity.

We have abstracted this evidence with some fulness; the theory it is supposed to support being evidently one of great interest. We have also pointed out that in the case of our own voluntary census the number of children born in families of restricted fertility was not, making allowance for differences of duration and age of marriage, less than that found in the case of unlimited marriages. The same remark appears to apply to the data collected by Mr. Sidney Webb. His figures were not tabulated to throw light upon this point, but it would appear that the mean size of family in marriages of unlimited fertility in his data was 2·88 for a mean duration of about eighteen years, while for marriages of limited fertility the mean was 2·7, but the duration was only fourteen years.

Some schedules obtained in answer to an inquiry circulated for us by Lady Willoughby de Broke[1] also showed a higher average of children in the limited families than in the unlimited ones. The figures upon which these averages are based were extremely small, and the durations of marriage not stated.

In view of the statistics contained in the national records and submitted to us in Dr. Stevenson's evidence, it is, we think, very difficult to adopt the interpretation placed by Dr. Chalmers upon the necessarily imperfect records of Glasgow in the seventeenth, eighteenth and

[1] See pp. 330–331.

early nineteenth centuries, and the obvious complexity of the returns from voluntary censuses, such as those of Mr. Sidney Webb and ourselves, precludes us from regarding the mean sizes of family in the two groups as really strengthening the case in favour of Dr. Brownlee's and Dr. Chalmers's contention. On the whole we believe that the interpretation placed upon the facts by Dr. Stevenson is the one meriting acceptance. But in this section of the report we abstain from any more definite expression of opinion.

We shall now refer briefly to evidence derived from foreign statistics. Any attempt to provide a complete review of European experience would enlarge the bulk of our report to an undesirable extent, and we propose merely to note some salient factors, at the same time providing a short bibliography for the assistance of those readers who desire to obtain fuller information. We would remark that this bibliography is in no sense exhaustive; that papers of importance have been omitted, while others that have no very great value may have been included; but we hope that it will be sufficient to introduce the student to the very large literature which has accumulated around the problem.

The following table shows the decline in the birth-rate in certain European countries—

	Decade of highest rate	Highest rate	1891 to 1900	1912
Denmark	1851–1860	32·5	30·2	25·6 (1914)
Norway	„	33·0	30·4	25·2 (1914)
Finland	„	35·9	32·1	27·1 (1913)
Germany	1871–1880	39·1	36·1	27·5 (1913)*
Belgium	„	32·7	28·9	22·6 (1912)
Netherlands	„	36·4	32·5	28·2 (1914)
Austria	„	39·0	37·1	31·3
Italy	1881–1890	37·8	35·3	31·7 (1913)
Hungary	„	44·0	40·4	36·3
Servia	„	45·4	41·9	38·0
France	1801–1810	32·2	22·1	19·0 (1913)

* Less Mecklenberg Schwerin and Mecklenberg Strelitz.

These figures are taken partly from Prinzing, who gives the rates in decades, and, for the 1912 (1910) rates, from the Registrar-General's Annual Report for 1912.

In Continental Europe the birth-rate rose after the Napoleonic campaigns, fell towards the middle of last century, then rose again before the marked and consistent decline, which is now practically universal, set in.

In the north—*i. e.* Denmark, Norway and Finland—it reached its highest point in the decade from 1851–60; in mid-Europe (England, Germany, Belgium, Netherlands, Austria) two decades later; while in Italy, Hungary, and Servia the period of highest birth-rates was reached in 1881–90. The figures for Russia and Portugal are probably too unreliable for acceptance. It may be noted (1) that decline set in first in those countries with a relatively low birth-rate, and (2) that where it set in first the rate of decline has been slowest. Thus in the first group the maximum birth-rate was 33·8, and the mean annual fall over a period of fifty years was ·12; in the second group the maximum rate was 36·5, and the mean decline ·26 over thirty years; in the third the rate was 42·4, and the decline ·32 over twenty years.

The figures for France are as follows—

Decade	Birth-rate	Decade	Birth-rate
1801–10	32·2	1861–70	26·1
1811–20	31·6	1871–80	25·4
1821–30	30·8	1881–90	23·9
1831–40	29·0	1891–1900	22·1
1841–50	27·3	1901–1910	20·6
1851–60	26·2		

In assessing the magnitude of the decline and its effect upon population, it is right to take into consideration the corresponding death-rates. The point is illustrated in the accompanying table (IV), which compares the

"natural increases" of England and Wales, the German Empire and France for a series of years. It must, however, be remembered that such a comparison is apt to be misleading in that no account has been taken of emigration and immigration and, since these factors operate to different extents in the countries compared, the graphs do not correctly represent the real increases or decreases of population. The existence of this disturbing cause, not to speak of variations of efficiency in registration and enumeration, seriously diminish the utility of international comparisons.

IV

NATURAL INCREASE OF POPULATION PER 1000

Year	England and Wales	German Empire	France
1886	13·3	10·8	1·4
1887	12·8	12·7	1·5
1888	13·1	12·9	1·2
1889	12·9	12·7	2·3
1890	10·7	11·3	— 1·0
1891	11·2	13·6	— ·3
1892	11·4	11·6	— ·5
1893	11·5	12·2	·3
1894	13·0	13·6	1·1
1895	11·6	14·0	— ·5
1896	12·5	15·5	2·5
1897	12·2	14·7	2·8
1898	11·8	15·6	·9
1899	10·9	14·3	·8
1900	10·8	13·5	— ·5
1901	11·6	15·0	1·9
1902	12·2	15·6	2·2
1903	13·0	13·9	1·9
1904	11·7	14·5	1·5
1905	12·0	13·2	1·0
1906	11·7	14·9	·7
1907	11·4	14·3	— ·5
1908	11·9	14·0	1·2
1909	11·2	13·9	·4
1910	11·6	13·6	1·8
1911	9·8	11·3	— ·9

The following general observations are based upon

an examination of national statistics and private monographs.

For the British Dominions beyond the seas, the best available statistics are those relating to the Australian Commonwealth, where the decline of the birth-rate began later than in this country, was more rapid and has since exhibited some signs of arrest. A valuable memoir on the distribution of fertility in different social classes of New South Wales was published by Powys in 1905 (*Biometrika* IV., 233) in which the question of net and gross fertility is investigated, and it is shown that some 50 per cent. of the next generation are produced by 25 per cent. of the existing generation.

The statistics of the United States are less reliable, and have been less analysed.

In the case of Europe, the official statistics of the following countries are valuable : France, the German Empire and its constituent States, Austria-Hungary, Belgium, Holland, Scandinavia, Switzerland, Italy. In all these countries a more or less definite decline in the birth-rate has been observed.

The most valuable collection of data directly dealing with this subject is the *Statistique des Familles* issued by the authorities of the Statistique Générale de la France. For all the countries mentioned it is possible to calculate the legitimate birth-rate in terms of married women at fertile ages, when this datum is not actually published, and the greater frequency of census enumerations renders comparisons of such rates more satisfactory than in England. Except in the case of France (and only partially there) it is hardly possible to provide comparisons of the fertility in different social classes on the scale contemplated in the case of the 1911 census of England and Wales.

Of the analytical literature dealing with and founded upon data contained in the official sources just men-

tioned, a short list comprising the chief monographs is appended. As will be seen, the majority of these treatises are French. Many of the works named are of little statistical importance, consisting either of *ex parte* assertions or imperfectly analysed statistics. The more important treatises are those of Westergaard, Bertillon, and Kiaer. Wolf's book collects the most recent figures, but the author's statistical competence is not, in our opinion, of a high order. More than one recent German writer has argued that the present trend of the birth-rate will increase the preponderance of the Slavonic stocks, but the very questionable accuracy of the Russian data, and those relating to the Balkan States, renders these conclusions doubtful. Wolf has also presented tables tending to show a confessional bias, the birth-rate in Catholic communities not falling at the same rate as in Protestant countries. The value of his arguments on this point has been contested by Marcuse and the matter can hardly be regarded as settled.

Income

The relation between the birth-rate and financial circumstances has been the subject of detailed study in several European countries—notably by Verrijn Stuart in the Netherlands—(see his paper "Natalité, etc., selon le degré d'aisance," with tables of urban and rural areas in four social groups); by Ruebin and Westergaard in Denmark (see "Statistik der Ehen.," with tables in five social groups); J. Bertillon for Paris, Berlin, Vienna and London (see "La Natalité selon le degré d'aisance," with birth-rates in six divisions for districts of varying degrees of wealth or poverty); Hindelang in Bavaria, etc.

Beside these there is the well-known work *Statistique*

des Familles, Paris, 1906. The first part of this gives figures for France in four social groups, and the second part gives very elaborate and exhaustive tables based on income for employees and workmen in public services.

It may be said that the general conclusion arrived at by these investigators is that the birth-rate falls as the income rises. We have pointed out that the same result emerges from our national statistics.

Occupation

On the relation between occupation and decline in fertility the information is more meagre than that concerning social well-being. The authorities above cited deal with it group-wise in greater or less degree. Prinzing, in his *Medizinische Statistik*, gives a few figures as to birth and fertility rates in two divisions, "Mining and industry," and "Agriculture." Part 3 of the *Zeitschrift des K. Preussischen Landesamts*, 1912, gives tables of births in Prussia in 1907, according to parental occupation, numbers of married men in occupations, and birth-rate per 100 married men, and also the number of births for Prussia in 1911, according to parental occupation. Further, it contains tables showing the males married between 1895 and 1906 in occupational divisions, with the legitimate children born, and average number of children per marriage. The Annual Reports from Budapest have for some years contained tables of births according to parental occupation. The Swiss figures for 1871–90 give the legitimate fertility rates in 65 industrial districts as 23·7; in 69 mixed districts as 25·7; in 48 agricultural districts as 26·6. Prinzing, however, fails to find any correlation between industrial and agricultural callings and the birth-rate. The Prussian figures

for 1907 give the birth-rate for that year calculated on 100 married men in agriculture as 18·8; in mining, 27·3; in industrial callings other than mining, 18·0; in commercial callings, 16·4; in domestic service, 64·4; professions, 13·7; in each case these figures show a fall as compared with the results of 1894, 1895, and 1896, founded on occupations as shown by the census of 1895, the fall being greatest in the professional and commercial classes.

Urban and Rural

The evidence as to birth-rates in town and country is somewhat conflicting. Verrijn Stuart found that the average number of children per family when the marriage had continued for sixteen to twenty-one years was 5·30 in town, and 5·07 in the country. Prinzing, however, gives the comparative figures of legitimate fertility for Prussia as follows—

	1879–82	1894–97
Berlin	23·8	16·9
Great towns other than Berlin	26·7	23·5
Towns of 20,000–100,000	26·8	25·7
Towns of less than 20,000	27·8	25·9
Country districts	28·8	29·0

For Denmark the rates were—

	Copenhagen	Other Towns	Country
1860–69	21·1	23·7	23·2
1870–79	21·9	24·4	24·0
1880–89	22·9	25·7	24·3
1890–1900	17·4	22·5	24·4

In France the highest legitimate fertility figure is in the nine Departments with less than 30 per cent. of agricultural population.

The *Zeitschrift des K. Preussischen Landesamts* for 1912 gives the following figures—

Districts with—	Mean legitimate fertility 1894–6	1904–6
Over 70 per cent. agriculturists	31·2	30·2
55–70 per cent. „	28·2	26·6
45–55 per cent. „	26·9	24·9
30–45 per cent. „	26·5	23·8
10–30 per cent. „	27·7	23·7
Less than 10 per cent. „	24·2	21·5

Hindelang gives the following figures for Bavaria of births per 1000 married women between the ages of 16–50—

	Towns	Other districts
1871–75	245	314
1879–88	213	312
1891–1900	213	315
1901–5	218	318

For Franconia—

	Towns	Other districts
1871–75	243	279
1879–88	208	254
1891–1900	222	257
1901–5	222	272

For Swabia—

	Towns	Other districts
1871–75	257	340
1879–88	202	320
1891–1900	216	307
1901–5	207	308

Religion

The material here is not very extensive. The Prussian figures [1] for 1895–1900 give the number of children per marriage as—

Both parents Catholic	5
Both parents Evangelical	4
Both parents Jews	3·7

[1] The Berlin Census of 1885 gives the figures on existing marriages, without regard to duration, as Catholic 3·225, Evangelical 3·130, Jew 3·320.

Von Fircks, Krose, Mombert, and Hindelang have all come to the conclusion that the birth-rate in Germany is higher among the Catholics than among other religious denominations; the last named comes to the same conclusion as to Bavaria, and particularly in the country districts, adding, however, that large families are less burdensome in the country than in the towns.

Sterility

Childless marriages of over twenty-five years' duration were—

Berlin	(1885)	11·2 (Bockh).
Oldenburg	(1876–85)	9·2 (*Statistische Nachrichtungen*).
Copenhagen	(1880)	11·5 (Ruebin and Westergaard).
Norway	(1894)	6·8 (Kiaer).
Rio de Janeiro	(1890)	11·0 (Kiaer).
New South Wales	(1891)	4·6 (Kiaer).

According to Verrijn Stuart, 13·1 per cent. of marriages of sixteen to twenty-one years' duration were childless in the Netherlands. The Massachusetts census of 1885 shows 11·9 per cent. of childless marriages in which the wife is over fifty years of age. The *Annuaire Statistique de la France*, 1900, gives the percentage of marriages without living children of over twenty-five years' standing in 1896 as 12·5 for the whole of France and 16·5 for Paris.

Some data relating to portions of the United Kingdom may be added.

The report on the Irish Census (vol. v., page 475) shows that of 471,950 married couples, with wife aged under fifty years at marriage and duration of marriage under thirty-five years, 79,066, or about 16 per cent., were childless. Excluding marriages of less than five years' duration, and those where the wife's age at marriage was forty-five to fifty, the proportion of childless unions is 11·2 per cent.

The Scottish Census (vol. iii., p. xxvi.) shows that of

239,943 marriages in which the wife was of child-bearing age at the time of marriage, and which continued till the end of the woman's child-bearing period, 27,478 or 11·5 per cent. were sterile. It will be seen that this agrees closely with the last-quoted figure for Ireland. The percentage, of course, varies with the age of the wife at the time of marriage, being less than three per cent. for age at marriage 17–19; less than 4 per cent. for age 22 or under; 7 per cent. for age 25; 10 per cent. for age 28; 13 per cent. for age 30; 25 per cent. for age 35; 57 per cent. for age 40, and over 80 per cent. where the wife was aged 43 at the time of marriage.

General Conclusions

This rapid survey of the continental evidence does not lead to the discovery of any important facts casting doubt upon the validity of the inferences drawn from the official statistics of the United Kingdom. The position of France is indeed exceptional in that her birth-rate fell before any change was detectable in other countries and has since remained on a level to which no other birth-rate has fallen. But in the case of Northern and Western Europe there is unequivocable evidence that a sharp decline is taking effect, and we have no warrant for refusing to entertain the belief that, under normal circumstances, the position of France would be ultimately paralleled elsewhere. Of course, the consequences entailed by the present international strife cannot be predicted. In the case of Italy and Eastern and South-Eastern Europe, there is little or no evidence of a declining birth-rate, but the vital statistics of the countries in question are not of the same value as those of our own or of France and Germany.

Were we entitled to take the figures at their face value, we should, of course, infer that the differential rates might ultimately lead to important modifications of the racial

constitution of Europe, but for the reasons just assigned we are not justified in drawing any definite conclusion.

Further, we have no right to regard the existing high birth-rate as static.

Findings with Respect to the Birth-rate of the United Kingdom

We consider that the following propositions are definitely established.

1. That the birth-rate has declined to the extent of approximately one-third within the last thirty-five years.

2. That this decline is not, to any important extent, due to alterations in the marriage-rate, to a rise of the mean age at marriage, or to other causes diminishing the proportion of married women of fertile age in the population.

3. That this decline, although general, has not been uniformly distributed over all sections of the community.

4. That on the whole the decline has been more marked in the more prosperous classes.

5. That the greater incidence of infant mortality upon the less prosperous classes does not reduce their effective fertility to the level of that of the wealthier classes.

We consider that the following propositions, although based upon evidence less substantial than that upon which conclusions (1) to (5) rest, are also sufficiently well established.

6. Conscious limitation of fertility is widely practised among the middle and upper classes, and there is good reason to think that, in addition to other means of limitation, the illegal induction of abortion frequently occurs among the industrial population.

7. There is no reason to believe that the higher education of women (whatever its indirect results upon the birth-rate may be) has any important effect in diminishing their physiological aptitude to bear children.

Section II

ECONOMIC AND SOCIAL ASPECTS

The evidence[1] taken on this important branch of our subject was rather scanty, and this must be our excuse for dealing shortly with the very difficult problems which it raises. This report makes no pretensions to be a treatise on the whole population question.

It is most necessary to bear in mind that the density or sparseness of a country's population is the consequence as well as the cause of its social and economic condition. An old country is generally peopled up to the number which its existing standard of living will permit, though economic or social changes may at any time raise or lower the limit.

History indicates that a rapid increase of population occurs (*a*) in thinly peopled agricultural lands newly developed, especially when facilities exist for exporting the produce (Russia, the United States, Canada, the Argentine); (*b*) in well-peopled countries during periods when trade is expanding rapidly, and wealth increasing (England and Germany). In these cases the stimulus of the new prosperity ceased to act upon the birth-rate after a time; (*c*) the adoption of a new food, like the potato in Ireland, sometimes facilitates the growth of population, for a time, to an abnormal extent.

A stationary population indicates (*a*) absolute saturation, large parts of India and China, Java, Jamaica, Barbados. On a higher level of culture

[1] See pp. 282–298, 413–425.

Belgium and the Channel Islands are almost as full as they can hold; (*b*) a high and stable culture under democratic institutions, encouraging love of comfort, social ambition, and fear of sinking in the social scale (France, the American-born population of the New England States); (*c*) unprogressive barbarism (Turkey and most uncivilized countries).

Depopulation, or positive decrease, when not caused by massacre (Soudan under the Mahdi) or prolonged war (Germany during the Thirty Years' War), is a rare phenomenon. The chief example in history, the depopulation of the Roman Empire, has been only partially explained. The chief causes seem to be (*a*) new diseases (Fiji, Tahiti); (*b*) the institution of slavery, which is so destructive of human life that it can only be maintained by a stream of fresh captives; (*c*) very oppressive or stupid government, strangling all enterprise.

Some Asiatic countries are so densely populated that the inhabitants have barely enough food to keep them alive. These countries have an enormous birth-rate, sometimes over fifty per thousand, and the majority of the children (it is said over 70 per cent. in parts of China) are allowed or encouraged to die. The main causes of the fertility of Asia, which does not necessarily lead to increase of population, but only to a high death-rate and constant pressure upon the means of subsistence, are degraded social conditions, precluding hope and fear alike; in the case of Canada (French Canada, where the average family numbers about nine) the effect of religious sanctions must be considered. The Boer farmers also have very large families. The child-labour in English mills before the factory acts was a direct stimulus, of a sinister kind, to large families; and in many sections of the working-class the hope of being aided by sons and

daughters in old age acts as a prudential stimulus, so far at least as to make childless marriages uncommon.

For a closed country, which must produce all its own material necessaries, the doctrine of Malthus, that population tends to press upon the means of subsistence, holds good as a general proposition. Scientific and intensive cultivation is only a palliative; the pressure will soon be felt again.

For a country open to commercial intercourse with the world, like Great Britain, the law of Malthus does not necessarily hold at all. It cannot, in fact, be said that there exists any over-population in this country, in the sense that population has actually been growing faster than the available means of subsistence. The consumption of various foods and other materials per head of the population has increased. The possibility of a continuance in this capacity for growth depends on the power of our countrymen to produce some commodities or services which other nations need, more advantageously than they can be produced elsewhere. Even our present population can be supported only while we are able to exchange our industrial products for imported food, and we should be reduced to abject poverty if foreign countries could supply their own needs or buy more advantageously elsewhere.

There is no reason to think that a further reduction in the English birth-rate would at the present time give a larger yield of wealth per head. It would attract foreign labour into this country, if it were allowed to enter, and would check the migration of labour to our dominions. It would slightly lower the death-rate, if the reduction occurred in the most prolific and improvident class, where infant mortality is high, but not otherwise.

From the more restricted point of view of the *Family*, the number of children may be considered too large

when it presses upon the means of subsistence—food, housing, and other necessaries of an efficient family life, including such opportunities of education as conduce to efficient workmanship and citizenship. It may be considered too small when satisfaction is denied to natural parental instincts, and when a child suffers from want of companionship. Instances of both these evils are very numerous.

Labour and Capital.—Over-population from the standpoint of a grade of labour, a locality, or the working-classes as a whole, means a rate of increase in the supply of labour in excess of the effective demand for such labour, a condition which tends to reduce wages and lower the standard of living. We may also speak of over-population when an increase in the supply of labour checks a rise of wages which would otherwise have taken place.

It is natural that the workers in each trade should desire to restrict the numbers of those who might wish to enter the trade, and that employers should wish for a surplus of labour. These wishes are both prompted by mere class-interest, and do not consider the welfare of the nation as a whole. The possibilities of improving the condition of the working-class by a shortage of labour are not great in a country which depends on foreign trade. The conditions are quite different from those which made the labourer so prosperous in the half-century which followed the Black Death.

We must, however, face the fact that every rise in the condition of the artisan tends at present to lower the birth-rate in his class. Wherever political and social conditions bring a man or a class into a position in which he hopes to rise or fears to fall, the family will be restricted. That class of motives which we may blame as love of comfort, snobbishness, vulgar ambition, timorousness, or praise as proper pride, desire for self-

improvement, and prudence, is the most potent cause of family restriction. And here it is difficult to exaggerate the importance of a wise distribution of State burdens. Any form of State relief which favours the reckless at the expense of the prudent will in itself have the effect of multiplying the former and diminishing the latter.

The World Standpoint.—Supposing it to be true that the population of this or any other country may advance rapidly without experiencing any injurious pressure, may, or must, this policy react injuriously upon the world at large, by hastening the time when the available resources of the whole earth may be unduly taxed to maintain the total population? A country like ours may shed any surplus by emigration, and it may absorb into its own system foods and materials from other lands; but by both of these processes it may be hastening the arrival of the period of general over-population.

There are those who argue that the recent rises (prior to the war) of world prices for foods and materials are evidence of an excessive growth of world population. But it is doubtful whether this evidence proves more than that an increasing proportion of the population of the world has been moving on to a higher food level, and possibly a higher standard of consumption in general. There seems no volume of evidence sufficient to prove that the available supplies of foods and other materials in the world cannot and will not be expanded to meet the growing demands of population for a long time to come. Of general over-population in any absolute sense of the term there is no evidence.

When, however, we widen our survey thus, we come again to the question of quality of population, of the sorts of men who are increasingly to people the earth. Here the prime question arises, "Have we any reliable criterion of desirability in respect of races and race-

blends? Is there any evidence that a mis-population of the earth is taking place, in the sense of a refusal of 'higher' and intrinsically fitter races to multiply, while lower and intrinsically less fit peoples are spreading more numerously over the earth?" The necessary limitations of our knowledge about human qualities and their relative values for the civilization of the future, as well as our racial and patriotic biases, render it impossible to give a confident answer to these vital questions. There is recent evidence to indicate that the supposed differences in inherent racial qualities are much slighter than has been alleged, and that education and cultural environment explain the greater part of what were considered ethnical differences.

A pressure of population in any country brings as a chief historic consequence overflows and migrations into neighbouring or other accessible countries, not only for peaceful settlement, but also for conquest and for the subjugation and exploitation of weaker peoples. This always remains a chief cause of international disputes and wars. These struggles keep down the net growth of the world population with the maximum of pain and misery.

As regards the effect of war upon the quality of the population, it is generally admitted to exercise a selective power that is dysgenic. For it exposes to the risk of death a larger proportion of the more virile, the physically stronger, and, so far as the voluntary method of enlistment prevails, the more public-spirited of the male population, reducing their contribution to the stock of the next generation.

As regards Great Britain, it has been maintained by certain witnesses that there is no sufficient reason to conclude that the recent reduction of our birth-rate has so far been inimical to the well-being of the nation. Others maintain that, if a higher birth-rate, or a check

upon further reduction of the birth-rate be deemed desirable, or if an improvement in the character of the birth-rate can be obtained, such reforms would be facilitated by certain social-economic changes. Those who hold this latter view are of opinion that greater security and regularity of income, with adequate insurance against unemployment among all ranks of workers would be of material assistance. An adequate secure income would give that sense of safety and that power of provision for the future needed to secure freer play for the instinct of parenthood. The equalization of opportunities for education and for technical and professional training, conducive to a greater equalization of incomes and of standards of living, not only would reduce the extreme risks of poverty, but would weaken those motives of mingled timidity and social ambition which, especially among superior artisans and the middle classes, promote late marriages and small families. A better distribution of income is also held desirable for bringing about such improvements of the housing of the working-classes as will remove the arbitrary restraints upon the size of families that exist at present.

On the other hand, such statistical evidence as is available for establishing a comparison of the birth-rate among the different social and pecuniary grades of our population indicate that the better-to-do classes restrict more closely the size of their families, and that even among certain of the wage-earning classes the birth-rate varies inversely with the income.

The eugenic question has not been considered in detail, the science of heredity being still in its infancy. The birth-rate in Great Britain is strongly selective, the nett as well as the gross surplus of births over deaths varying (as a rule) inversely with the social position of the family. The physical and mental inferiority of the

most fertile social strata, except in the mining districts, is indisputable; but the Commission thinks that the greater part of this class inferiority is probably due to bad environment, and deprecates the tendency to identify the economic élite with the psycho-physical élite. The Commission does not, of course, seek to deny the inheritance of both mental and physical characters, and it recognizes that legislation which ignores the facts of variation and heredity must ultimately lead to national deterioration; but it cannot accept the hypothesis that the broad distinctions between social classes are but the effects of germinal variations, and is satisfied that environmental factors which cannot be sensibly modified by individuals exposed to them, however gifted, often prevent the utilization of natural talents.

Section III

THE HOUSING QUESTION

The evidence on the Housing Question given before the Commission, is limited to London, and deals only with accommodation provided by the London County Council, the Duchy of Cornwall, and the Guinness Trust. But the evidence obtained from the London County Council and the Guinness Trust may be regarded as typical of the conditions existing in large urban districts, as it deals with districts scattered over the Metropolitan area, and also with the provision of dwellings for the very poor, as well as for the better-paid artisan. The evidence all points in one direction, viz. that children are the crux of the question. All the witnesses are quite emphatic on this point. Landlords do not willingly cater for large families; in fact, they prefer tenants who have no children. It may be worth while briefly to consider the grounds of the objection to children, either in private houses or in tenement blocks.

Children living in crowded dwellings are often destructive and always noisy. Their opportunities for play, especially in the winter, are limited to the streets or courtyards near their homes, except on the somewhat rare occasions when they go to open spaces for the purposes of play. Landlords naturally desire to protect their property, and to avoid annoyance to good tenants who are disturbed by the presence of children,

either in adjoining houses or adjoining tenements. For example, there may be a row of houses let to good tenants, who like quiet, and into one of the houses there comes a family with four or five children. In bad weather they are kept indoors, and their noisy play is a nuisance to the next-door neighbours. When it is fine they play in the back garden and the noise they make may disturb the occupants of all the houses within earshot. In the complex life of London and great towns there are many night-workers, postmen, policemen, railwaymen, tramway and bus employees, engineers, gasworkers, printers, compositors, etc., and these have to get their sleep during the day. It is obvious that, particularly in the summer, when noises are more acutely heard and sleepers more easily awakened than in the cold weather, a few children playing in the back garden, even several doors off, or playing in the street, make it impossible for a night-worker to get his proper rest. There is the trouble, too, in the case of infants, of their crying during the night.

Again, many elderly people, or persons in delicate health, find it necessary to take some sleep in the day hours. They find themselves subject to the same annoyance if there are children in the immediate neighbourhood. Naturally all this applies even more strongly when a house is let in flats or tenements.

But this is only one side of the question, although a very important one. A growing family requires increasing accommodation. A young couple may start with two or three rooms, and in a few years they ought to have four. They cannot afford to pay for the cubic space needed for children, as much as could be paid by adult occupants of the same accommodation. So the landlord is faced with the necessity, either of refusing his rooms to the man with many children, or

with letting them at a less rent than he could obtain if he accepted only adults.

These points may seem trivial, or at least irrelevant, but they have an important bearing, as showing the causes of the unwillingness on the part of most landlords to let their property to persons with large families. It seems, therefore, fair to say that, taken as a whole, property owners object to families with children, especially young children, purely on business grounds. In so doing they are not to be regarded as any more grasping or selfish than other business people, who in their dealings seek to get the best return for their money.

All over London there are numerous small property owners who have two or three or four or five houses belonging to them, upon the rentals of which they depend for a livelihood. Such landlords naturally wish to get as much as they can from their property, and to do so they must secure the highest possible rent and keep the repairs down to the lowest figure. This can best be done by letting the houses to persons who either let off a portion to people without children, or to tenants who take in lodgers. It is easy to realize that families with children find themselves unable to get accommodation in property thus owned.

Another class of owner has the same objection to children, namely, the person who has acquired one house and wishes to let off part of it. This probably applies in a more marked degree to the suburbs than to the central areas of London where small houses are by no means so numerous.

The evidence given by Mr. Berry[1] of the London County Council Housing Department shows that married couples with children are glad to avail themselves of the accommodation in the tenements which have been erected by the Council. Every effort seems to have

[1] See pp. 188–205.

been made by the Housing Department to make it possible for their tenants to have large families, provided that the rules against overcrowding are not violated. Rule 55, made by the Housing of the Working-Classes Committee, provides as follows—

"As a basis for letting tenements the Housing Manager is authorized to allow two persons per room, provided that he may, *in special cases*, allow an addition to this number of one child under three years of age. After taking each annual census the Housing Manager is to report on all cases of overcrowding, and the Committee are to decide what action shall be taken according to the circumstances."

Rule 54 provides—

"In ascertaining whether any tenement is overcrowded the Housing Manager is to allow for two persons to each room, excluding each child under the age of five years, and counting each child between the ages of five and ten years as half an adult."

The following actual cases have been furnished by way of supplement to his evidence as three typical instances of the working of the above Rules in the cases of families who have resided in the Council's dwellings for a number of years. As concrete cases they are valuable evidence as showing the difficulties which have to be faced by growing families, particularly where the children are of different sexes.

I. The tenant entered into occupation of No. 55, Henley Buildings (a two-room tenement), in 1901, when the family consisted of husband and wife.

In 1914 (fourteen years) the family came under the overcrowding regulations and have now transferred from a two-room to a three-room letting on the same estate.

55, Henley Buildings—2 Rooms.

Date	Family consisted of				Equivalent under the Council's scale. Rule 54
	Adults	Boys (ages)	Girls (ages)	Total	
April 1901	2	nil	nil	2	2
„ 1902	2	„	1	3	2
„ 1903	2	„	2	3	2
„ 1904	2	„	3	3	2
„ 1905	2	„	4 1	4	2
„ 1906	2	„	5 2	4	2½
„ 1907	2	„	6 3	4	2½
„ 1908	2	„	7 4	4	2½
„ 1909	2	„	8 5 1	5	3
„ 1910	2	„	9 6 2	5	3
„ 1911	2	„	10 7 3 1	6	3
„ 1912	2	„	11 8 4 2	6	3½
„ 1913	2	„	12 9 5 3	6	4
„ 1914	2	1	13 10 6 4	7	4½

II. The tenant entered into occupation of No. 13, Thackeray Buildings (a three-room tenement), in 1904, when the family consisted of father, mother and three boys, aged nine, four and two years. In 1914 (eleven years) the family came under the overcrowding regulations, and in order to abate this the family now rent an additional one-room tenement in which two boys sleep.

13, Thackeray Buildings—3 Rooms.

Date	Family consisted of				Equivalent under the Council's scale. Rule 34
	Adults	Boys (ages)	Girls (ages)	Total	
1904	2	9 4 2	nil	5	3
1905	2	10 5 3	nil	5	3½
1906	2	11 6 4	1	6	3½
1907	2	12 7 5	2	6	4
1908	2	13 8 6	1 3	7	4
1909	2	14 9 7	2 4	7	4
1910	2	15 10 8	3 5 1	8	5
1911	2	16 11 9	4 6 2	8	5
1912	2	17 12 10	5 7 3	8	6
1913	2	18 13 11	6 8 4	8	6
1914	2	19 14 12	7 1 9 5	9	6½

III. The tenant entered into occupation of No. 44, Barnaby Buildings (a three-room tenement) in 1908, when the family consisted of father, mother, three boys aged five, three and one, and two girls aged nine and seven, reckoned under Rule 53 as six persons, one not being counted. In 1914 (seven years) the family came under the overcrowding regulations and they elected to leave, when they moved into some new buildings erected by the Peabody Trust, situated in Rodney Row, Bermondsey.

44, Barnaby Buildings—3 Rooms.

Date	Family consisted of				Equivalent under the Council's scale. Rule 54
	Adults	Boys (ages)	Girls (ages)	Total	
1908	2	5 3 1	9 7	7	3½
1909	2	6 4 2	10 8	7	4
1910	2	7 5 3	11 9 1	8	4½
1911	2	8 6 4	12 10 2	8	5
1912	2	9 7 5	13 11 3	8	5½
1913	2	10 8 6	14 12 4	8	6
1914	2	11 9 7	15 13 5	8	6½

It would appear that the point of difficulty is generally reached when a family comprises four or five children. It is true that the difficulty is not so great where the children are all of one sex, nor does it make itself felt very acutely until several of them are over seven years of age, in the case of mixed sexes.

The evidence given by the Guinness Trust [1] is valuable as showing what can be done for the poorer wage-earners provided the undertaking has the advantage of a munificent gift from a public-spirited philanthropist. But even in such dwellings it is evident that the families find themselves in danger of overcrowding, especially when they have only two rooms. The following quotations make this clear—

[1] See pp. 231–240.

Q. Is there a greater pressure on the one-room, two-room or three-room tenement?

A. On the three-room, undoubtedly.

Q. The demand is for the three-roomed tenement?

A. Yes, three and four. One never has a vacancy, practically, for three rooms; in fact, an outsider never stands a chance.

Q. They move on?

A. Yes, from one room to two and three.

Q. Do many move on in that way?

A. Oh, yes.

Q. With the growth of the family?

A. Yes. We take a census each Christmas, and the Superintendent of the building makes out a list of overcrowding cases which he brings to me, and we adjust them as we are able. If we see no prospect of accommodation they have to go, but if we can possibly do it we try and arrange to give them the extra room they want.

Q. What do you mean by overcrowding?

A. We adopt the same rule practically as the London County Council.

The evidence from the Duchy of Cornwall[1] shows that in their Kennington estate lying roughly between the Oval and the Thames, a fine effort has been made, with the enthusiastic support of their Majesties the King and Queen, to transform a squalid district into a well-housed area with ample open spaces. It is hoped that this lead may be followed by other ground owners, at least by such Corporations as possess large portions of London, if not by private owners. But it must always be borne in mind that partial attempts, however successful within their limits, to solve the housing question in London and the great urban areas have so far only touched the fringe of the problem. The great mass

[1] See pp. 240–246.

of the poor and even better-off artisans still live in privately-owned houses where families with young children are not wanted, and where families with many children find it very difficult to secure accommodation. The operation of the sanitary requirements as to overcrowding makes the difficulty more acute for such parents, especially where there is sub-letting. It cannot be doubted that the father and mother of a growing family who may be quite willing to have more children are brought face to face with the prospect of being turned out of their rooms if another birth occurs, thus there is a silent yet steady pressure upon them not to run the risk of eviction, especially in tenements and the central areas of large towns.

But if the position in the towns is bad it is incomparably worse in the villages. The evidence taken by the Land Enquiry Committee whose Report was published in 1913 proves beyond doubt that throughout England there is a great dearth of cottages for the labouring classes, and that a vast number of existing buildings are utterly inadequate and much overcrowded. The effect of this is that young people often cannot get married for want of accommodation, that sons or daughters even when marrying have to continue to live with their parents in the already overcrowded cottage, and their children make the difficult conditions still harder for all concerned. It is hardly within the province of this Commission to comment upon the gross violations of common decency which such conditions may involve, but the numerous instances in the Land Enquiry Committee's Report of children of both sexes being herded together, of married or unmarried lodgers using the same sleeping-room with the father and mother and family, cannot be passed by without some allusion to their probable effect in reducing the birth-rate. It is obvious that parents who have to share their scanty

house accommodation with lodgers in this terrible way are not in a position to rear families of any size without incurring the risk of being forced out of their dwelling for overcrowding, and often compelled to quit the countryside.

The following quotation from the Land Enquiry Committee's Report will be of service—

"According to the Census of 1911, the number of inhabited dwelling-houses in the rural districts of England and Wales was 1,650,000. Of these a certain number were not inhabited by the working-class; a certain number were also in districts rural in name, but urban in character. Probably it would be safe to say that the number of cottages for the working-class in the rural districts is about 1,200,000. An additional 10 per cent. would mean the erection of 120,000 new cottages, and there is little doubt that if they were built during the next two years they would at once be occupied." The Committee then gives a summary of conclusions, several of which may be quoted as bearing upon the birth-rate.

"No. 1. That there is an urgent need in every county for more labourers' cottages, especially for cottages with three bedrooms.

"2. That the condition of many of the existing cottages is most unsatisfactory, a considerable number being entirely unfit for human habitation.

"3. That there is a great deal of overcrowding, which frequently makes it impossible to provide for the proper separation of the sexes.

"4. That the unsatisfactory housing conditions are largely responsible for, *inter alia*, a general lowering of the standard of life among those who remain in the villages; a serious interference with the independence of the labourers; young couples desiring to marry

being obliged to leave the district, or to live with their parents, or lodge with other families; the spread of diphtheria, scarlet fever, and other diseases, and the prevalence of tuberculosis and rheumatism; a considerable amount of immorality due to overcrowding.

" 5. That large numbers of cottages unfit for human habitation are not closed, owing to the lack of alternative accommodation. For the same reason necessary repairs cannot be demanded by the Local Authority or the tenant, lest the landlord should close the cottage rather than incur the expense of repairing it.

" 6. Thus taking into account both the existing scarcity, and also the scarcity that would be created if the Housing Acts were properly enforced, as far as can be estimated, at least 120,000 new cottages are required at the present time in England and Wales.

" 7. That this large demand for cottages is at present being met neither by private enterprise nor by local authorities."

It is very difficult for the Commission to make any recommendations of practical value for a solution of the housing problem both urban and rural. Authorities on the subject are all agreed that the root of the difficulty is the inability of the agricultural labourer in the country, and the unskilled worker in the town, to pay a commercial rent for adequate accommodation. Some writers argue that it is worse than useless for the State to intervene and give grants in aid towards suitable dwellings for the working-classes, especially in the country, so long as the present low rate of wages prevails. In other words, they maintain that until the worker secures a wage sufficient to enable him to pay a commercial rent for such accommodation the money intended to benefit the wage-earner will in reality mainly benefit the employer of cheap labour. On the other hand, as is well known, in recent years numerous

labourers' cottages have been built in Ireland under the Irish Labourers' Acts of 1906 and 1911.[1] A competent authority has stated that the effect of the building of these cottages has been to raise the standard of life of the labourers, to get rid of acute poverty, and to strengthen and develop the character and independence of the population who have benefited by them; and that it is remarkable that in County Cork, where an exceptional number of cottages have been built, the wage has increased more than elsewhere. It does not, however, seem prudent for the Commission to go beyond putting on record its deliberate opinion that the housing question, both in town and country, makes the rearing of large families by the working-classes a matter of great difficulty and also affects the birth-rate. Experience, however, shows that where cheap and rapid transit to and from the outside areas of great towns has been provided the poorer classes have been enabled to obtain suitable accommodation at less cost than in the central areas, where the price of land is necessarily very high and where dwelling-houses are being displaced to make room for commercial buildings.

[1] Mr. Henry D. Harben, *The Rural Problem*, Constable, London.

Section IV

MEDICAL ASPECTS

It is necessary to distinguish between totally different factors of an artificially reduced birth-rate. The evidence brought before the Commission and considered by it serves wholly to condemn generalizations which take no cognizance of the medical, medico-legal and ethical distinctions between, for instance, the limitation of *coitus* to the inter-menstrual period, the use of diachylon pills, the performance of double vasectomy or oöphorectomy, and the criminal production of abortion, each of which reduces the birth-rate.

The prevention of conception and the destruction of the concept are fundamentally distinct, medically, medico-legally, and ethically, and the Commission cannot attach serious importance to pronouncements, from whatever source, which perceive no such distinction.

I. The Prevention of Conception.—Conception may be prevented, intentionally, by abstention or by the limitation of *coitus* to a certain phase of the menstrual cycle. Other methods which are widely employed are the use of various mechanical and chemical appliances, which are mentioned in the evidence.

We regret that we are unable to present a definite pronouncement as to the physical consequences of the use of these devices. The printed evidence [1] which follows does not enable a dogmatic statement to be made as to these, and in view of the fact that medical investigation on this subject is difficult and in large measure has

[1] See pp. 135–141, 246–263.

only recently been made, it is not surprising that no definite medical conclusion can be drawn.

II. The Destruction of the Product of Conception.—The destruction of the product of conception is condemned by law, and by medical ethics, except where the life of the mother is at stake, and the Commission is in entire agreement with the accepted canons on this subject. The product of conception may be killed in many ways, at any stage of its ante-natal development, with highly various degrees of risk to the mother; but in every such case a human life, however immature, has been destroyed.

Since investigations have shown that *diachylon* or *lead plaster* is being made use of in this country to a considerable extent for the purpose of procuring abortion, and frequently with serious consequences to health apart from the loss of offspring—also since from the therapeutical point of view just as good plaster can be made by Pharmaceutical Chemists without lead as with it, the Commission strongly recommends that lead plaster should cease to be a manufactured article, and that the sale of diachylon should be made a penal offence.[1]

Failing the realization of this, *diachylon* and all *salts* and *compounds of lead* should be scheduled as poisons, and only be sold or dispensed by a chemist on the production of a prescription from a qualified medical practitioner.

Certain other drugs are widely used for the same purpose, and are often injurious to the mother.

Influence of Venereal Diseases on Birth-Rate.—The influence of Gonorrhœa and Syphilis on the birth-rate is exerted in totally different ways. Gonorrhœa lowers the birth-rate by preventing conception. A woman suffering from gonorrhœal discharge is less

[1] See the evidence of Dr. George Reid and Sir Thos. Oliver, M.D., pp. 298–321.

likely to conceive than is a healthy woman, and in the later stages of the disease she is still less likely to conceive on account of the effects of gonorrhœal inflammation on the deeper-seated internal organs. To a lesser extent gonorrhœa influences the birth-rate by causing early abortions due to inflammation of the lining membrane of the uterus.

Syphilis, however, influences the birth-rate and infantile mortality in a different and much more serious way. According to figures submitted by Dr. Douglas White to the Royal Commission on Venereal Diseases the infantile mortality curve rises steeply from the end of the first year in life towards its beginning. He was of opinion that at least three times as many children die in the nine months before birth as die in the first twelve months after birth. Dr. Willey was of opinion that probably 32·8 per cent. of total still-births were due to syphilis, and Dr. Amand Routh states that the deaths during intra-uterine life are approximately equal to those that occur during the first twelve months of extra-uterine existence.

The same fact is represented in figures by Dr. Chalmers, of Glasgow, who found that during the latter half of the first year of life the deaths were 12 per cent., under six months 21 per cent., and during the first three months, 67 per cent. of the total mortality in the first year after birth. He also concluded that the percentage of deaths during intra-uterine life must be very heavy, and that it was necessary to have registration of still-births and miscarriages in order to ascertain the percentage in which syphilis is the cause of intra-uterine death. He pointed out that it was exceptional for a woman infected with syphilis not to have had a miscarriage, and cited the case of a woman who had three healthy children, but having subsequently become infected with syphilis she had six children dying during the first

year of life and one miscarriage. After this she was treated with salvarsan and mercury, and subsequently bore a healthy child.

According to Sir Thomas Barlow syphilis interferes with the birth-rate by leading to abortion. In his experience the first indication of a woman's infection was very often the occurrence of one or more early miscarriages followed by premature births, and lastly by living children who developed syphilitic manifestations. He was also of opinion that syphilis was not so common a preventive of conception as is gonorrhœa, but that it more frequently led to abortion, indeed that the vast majority of still-births were due to syphilis.

In the opinion of Dr. Mott 35 per cent. of female paralytic dements are childless, and this condition is frequently due to adhesive inflammation of the oviducts, the result of gonorrhœa. He emphasized the importance of notification of still-births and showed by means of most instructive diagrams that the first children of a marriage might be healthy, but that the husband having acquired syphilis he infected his wife, who thereafter bore a series of diseased or dead offspring. He also showed that in the case of a woman who was infected after marriage and had two children who died, early treatment with mercury enabled her to bear more or less normal children, but that after the cessation of treatment she relapsed and bore three diseased children.

He also showed that in all probability a woman suffering from congenital syphilis married to a healthy man may produce diseased offspring. In many cases, abortions, still-births and children dying in infancy from convulsions, meningitis, and hydrocephalus, may be ascribed to a congenitally syphilitic mother, or to a mother infected by a former husband.

A table presented by Dr. Mott showed that of 22 married women suffering from syphilis (locomotor ataxy

or general paralysis of the insane), 7 were altogether sterile, 10 children were born alive, 10 died in infancy, 18 were born dead, and there were 81 miscarriages or premature births, the conclusion being that when the mother is infected very few healthy children are born.

Dr. Mott also mentioned that out of the offspring of 54 married men suffering from syphilis and gonorrhœa, 151 children were born and lived, 75 died in infancy, and 52 were born dead at full term, or were miscarried, or came to premature birth. It was evident, therefore, that the proportion of dead or diseased offspring was considerably less in the case of infected fathers than in the case of infected mothers.

Dr. Amand Routh gave evidence to the effect that there are about as many deaths in intra-uterine life as in the first year of extra-uterine life, and that in a large proportion of deaths during the later months of pregnancy syphilis was the cause. He said that at Queen Charlotte's Hospital out of 119 children born dead, or dying soon after delivery, 59 were macerated and dead before labour, and 19 died during labour. Of the macerated children a large proportion were illegitimate and probably syphilitic. He regarded syphilis as one of the most serious causes of intra-uterine death.

Further on in his evidence Dr. Routh stated that the general still-birth rate for England and Wales was probably higher than 3 per cent. of total births. Accepting this percentage, and assuming, as is likely, that abortions are four times as frequent as miscarriages, he arrived at the conclusion that the deaths *in utero* and during the first year of life are about 100,000 each. When it is considered that the number of infants who survived this double loss in England and Wales in 1911 was only 782,362, it will be seen that the loss to the nation is enormous.

He also said that many of the children who are born

alive die within a few hours of birth, and that a large number of these die from ante-natal disease.

Again, one-fourth of the children who die in the first year of life really die during the first week of life, and although there was some doubt as to what proportion of early abortions were due to syphilis there was no doubt that of those which occur between the sixteenth and twenty-eighth week of gestation spirochætæ were found in 75 per cent., and that they were found in 84 per cent. of the macerated fœtuses born in the later months of pregnancy.

Dr. Stevenson, Superintendent of Statistics in the General Register Office, was of opinion that syphilis was a very constant cause of still-birth. He held that notification of still-birth was very desirable and would lead to further statistical knowledge. He found from his records that 45 per cent. of all illegitimate children were the children of domestic servants, and that whereas the death-rate for legitimate children was only ·99 per cent., it was for illegitimate children in general 9·1 per cent. and for the illegitimate children of domestic servants 8·5 per cent.

In fact, all the witnesses who were interrogated by the Royal Commission agreed that syphilis was a frequent, indeed a very frequent cause of abortions, still-births and infant mortality. They advocated the establishment of ante-natal and post-natal clinics with the opportunity of examination of the products of conception, also arrangements for the diagnosis of the expectant mother's condition with suitable treatment and instruction when necessary. They further approved of the notification of still-births and abortions, and agreed that while syphilis adds to the number of conceptions, owing to the short duration of each pregnancy, it causes a diminution of births at full term and also greatly increases infantile mortality.

Section V

MORAL AND RELIGIOUS ASPECTS

Religious Aspects.—The Commission received evidence from representative members of several religious bodies—the Established Church, the Church of Rome, the Jewish Community, and some of the Free Churches.

It was found that our clerical witnesses were almost without exception opposed, on moral and religious grounds, not only to the practice of abortion, which has had no defender among those who have given evidence before the Commission, but to the use of mechanical and chemical means to prevent conception. There was not the same unanimity as to the morality of restricting the family in other ways.

The Church of England.—An important document[1] was lent to us, which was printed privately in 1913, as the Report of a Committee of Anglican Bishops. We were informed that this report has received the sanction of the large majority of the diocesan Bishops in this country, but that the Committee was not unanimous, the Bishop of Southwark, who gave evidence, being one of the dissentients on a somewhat important detail. The report speaks with great earnestness of the prevalent degradation of marriage, and of the urgent necessity of upholding its sacred character, as a divine institution for the procreation of children and the consecration of human love. It condemns entirely the use of mechanical and chemical means to prevent conception, but admits that there may be cases in which a married pair may

[1] See pp. 382–388, 436–450.

legitimately desire to limit their family. In these cases the Committee does not condemn those who restrict their marital relations to those parts of the month in which conception is less likely to take place. It is on this last point that the Bishops were not unanimous. The Bishop of Southwark himself was disposed to think that procreation is the only legitimate object of marital intercourse, and that neither the lawful gratification of a natural instinct, nor the expression of mutual love can be pleaded as a sufficient motive for indulgence when conception, for any reason whatever, cannot occur. In giving this opinion he was careful to tell the Committee that he was speaking only for himself. The Bishop spoke with great earnestness of the destruction of unborn life in South London, which, he thinks, betrays instincts which are worse than savage. He believed that among the poor of South London appliances to prevent conception are not very largely used, and was convinced that the commonest method is abortion.

The marriage-service of the Church of England mentions three causes for which marriage was ordained, (1) the procreation of children, (2) the avoidance of sin, (3) the mutual help and comfort which husband and wife render to each other. It is clear that the second "cause" may in some cases make it unwise to recommend total abstinence in marriage, when an increase of the family is not desired.

In the absence of any recognized authoritative teaching, there are wide differences of opinion among the Anglican clergy on this subject. The objections formerly felt by almost all of them to family limitation have grown decidedly weaker since the beginning of the century; but their condemnation of mechanical and chemical devices is still, probably, almost unanimous. Among conscientious and high-minded laymen and women in the Anglican Church there are many who

openly justify the use of preventives, and this attitude has become far more common during the last few years.

The Roman Catholic Church.—The teaching of the Roman Catholic Church, being clearer and more authoritative than that of other religious bodies, admits of more definite statement. The Committee received from Mgr. Brown a very lucid exposition of the teaching of the Roman Catholic Church on this subject, and of the reasons which determine it. His evidence should be carefully studied.[1]

Of special interest in relation to the subject of this section are the rules for the conduct of the wife when the husband persists in practices forbidden by the Church; the occasional permission to limit intercourse to the inter-menstrual periods, as the only alternative to worse evils; the statement that this limitation is not a sin, and would not be held to be a ground for ecclesiastical discipline; and the assertion that marriage is an indefeasible right of every man and woman capable of procreation, so that the Roman Catholic Church is bound to condemn, as wrong in principle, legislation against the marriage of the physically or mentally unfit, though it may and does discourage such marriages.

The practice of family limitation is undoubtedly much rarer among observant Catholics than in any other religious body except perhaps the Jews, and the influence of the Church may be traced in the high birth-rate of French Canada and Catholic Ireland.[2] On the other hand, it may be noticed that those Catholic populations which have a very high birth-rate live for the most part under very simple and rustic conditions, and that urbanization, bringing with it a relaxation of

[1] See pp. 389–413.

[2] The *crude* birth-rate of Ireland is very low; the corrected birth-rate among Irish Catholics is probably about 40. The discrepancy is due to the emigration of young couples.

religious influences, has, especially in France, led to an extreme use of prudential restraint. The larger towns of Belgium, where secularism is strong, have also a very low birth-rate. Of other Catholic countries, Austria shows a rapid fall (38·0 in 1896; 31·3 in 1912); Italy a stationary birth-rate (32·6 in 1901; 32·4 in 1912); Chili a stationary and very high birth-rate (38·9 in 1893; 38·7 in 1912) combined with a very high death-rate (31·1 in 1911); Spain a slow decline (35·0 in 1895; 32·6 in 1912).

The Free Churches.—In the Free Churches[1] there has been no general discussion of, nor any authoritative pronouncement on, the question of the restriction of the birth-rate. While the liberty and responsibility of the individual conscience are very fully recognized, yet ministers do by public teaching and private counsel exercise a guiding influence on many moral questions. Moral guidance on this question has not, as far as we can discover, been sought by members of these Churches from their ministers, nor by ministers, called in this way to face the moral problem, from the trusted leaders to whom they usually turn in a similar difficulty. If the question has been raised at all, it has not been generally felt to be so acute or urgent a problem as to secure any public attention. It may, however, be admitted that owing to the moral independence of many Nonconformists they are less likely to submit their personal practice to the judgment of their ministers than the members of Churches exercising a more direct moral guidance; and we may, therefore, not be justified in the conclusion that restriction of family is not practised among Nonconformists, although there is no evidence, other than the general statistics, as to the existence or the method of such restriction. The attitude on Christian morals commonly held does warrant the conclusion that the

[1] See pp. 372–381.

great majority of Nonconformists, if confronted with the problem, would unhesitatingly condemn the use of all mechanical or chemical means of prevention, and would strongly insist on the voluntary moral control of all natural functions.

The Jews.—The Chief Rabbi [1] informed us that among the Jews the use of preventives is strongly condemned as unclean and demoralizing. The only exceptions that could ever be allowed are where there is danger to life; this consideration overrides almost all moral rules. Every male Jew is bidden to marry and have children. A widower with less than two children must marry again. Childlessness is regarded as a misfortune or a disgrace. Marriages of persons physically or mentally unfit for healthy parenthood are severely forbidden. The welfare of the next generation is the object chiefly kept in view.

Moral Aspects.—The ethical principles which determine the attitude of religious and conscientious persons towards the practice of family limitation are by no means simple. The following arguments against the practice are often heard—

(1) "The Bible says, Be fruitful and multiply." This uncritical manner of invoking the authority of Scripture is now generally discredited; and in any case the strongest Malthusian would not object to the precept when the population of the world consisted of only two or even eight persons.

(2) "All deliberate waste of the physical sources of human life is akin to murder." This principle has been held by some moralists to attach the guilt of homicide to every form of sterile gratification. No distinction, if this argument be admitted, can be made between the use of preventives and abortion, the effect in both cases being assumed to be to destroy a human life. The

[1] See pp. 425–436.

public conscience, however, does not endorse this verdict, but holds that the wilful destruction of the fœtus is an act of a different kind from the prevention of conception. It is now matter of common knowledge that the germs of life are produced in vast numbers by both sexes, and that they are constantly perishing from natural causes. But when conception has taken place an individual human being has begun to live. Hence prevention of conception cannot be regarded, as must abortion, as the destruction of a human life.

(3) "Self-denial in the marriage state is good for body and mind." This is perfectly true, up to a certain point; but it is thought by the majority of those who have a right to speak on the subject that long periods of total abstinence are, for a young couple, very undesirable, both on moral and physical grounds.

(4) "The public interest demands a high birth-rate, private selfishness desires a small family." This argument begs very important questions, which belong to other sections of our report.

(5) "The mechanical interference with a natural process is wrong; it is an attempt to outwit nature." This is the really crucial argument against the use of mechanical or chemical devices to prevent conception, and it must be carefully weighed. There are some who speak contemptuously of all scruples of this kind, regarding them as mere taboo-morality, irrational prohibitions with no sanction except long custom. Now it cannot be denied that civilized man has inherited some moral prejudices which have survived from the savage state only because a superstitious awe has protected them from criticism. The conquest of these superstitions is a necessary and important stage in the emergence of a nation from barbarism. But we may admit this without assuming that every moral scruple for which no

utilitarian justification can be pleaded may safely be thrown aside. To disregard instinctive repugnances in matters of sex-morality is exceedingly dangerous, and would lead logically to the toleration of acts which all decent persons condemn. The awe which surrounds these functions of nature and which checks experiments in this region has unquestionably acted as a preservative of the race in the past, and it would be rash to suppose that its usefulness is over. The religious mind accepts such awe as a warning from God that certain acts are displeasing to Him; and even the non-religious may reasonably regard it as a true racial instinct. We have therefore to consider, not only the utilitarian aspect of these practices, but whether they really offend the tender but enlightened conscience. For this is the true meaning of the objection against "outwitting nature." In a sense we are always trying to outwit nature, believing that nature loves to be conquered; but there is another sense in which nature knows how to punish those who seek to evade her laws, and her penalties may be secret and incalculable. The form in which this question may be best put is perhaps this: "Do these practices offend against a deep-seated racial instinct?" If so, the *onus probandi* must rest upon those who maintain that the instinct may be safely disregarded.

While we have confined ourselves to discussing the moral and religious aspects of the declining birth-rate in respect of the married, we cannot close our eyes to the fact that the more widely spread knowledge of the means of preventing conception by the unmarried not only involves the removal of the prudential restraint on licence in sexual relations, but may affect the birth-rate in the future in two ways: (1) marriage with its responsibilities may be avoided, since sexual gratification is being obtained without any social obligations being

incurred, (2) a practice begun before marriage may be continued after marriage.

W. R. Inge (*Chairman*).
Consuelo Marlborough.
H. R. Birmingham.
Willoughby de Broke.
Marie Willoughby de Broke.
Laura Aberconway.
J. Barking.
W. F. Brown.
J. Macdonell.
James Crichton-Browne.
G. Sims Woodhead.
J. W. Ballantyne.
Alfred T. Schofield.
C. W. Saleeby.
Mary Scharlieb.
Florence E. Barrett.
Agnes Savill.
Florence E. Booth.
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A. E. Garvie.
H. Gollancz.
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John A. Hobson.
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James Marchant (*Secretary*).

ADDITION TO THE REPORT

While concurring in the conclusions and recommendations of the whole Commission, the undersigned members of it are of opinion that something more will be expected of those who have had the advantage of considering the evidence and the information submitted.

Two questions of fundamental importance especially demand some answer. (1) Is the present decline of our national birth-rate regrettable? (2) If it is regrettable, is it preventable, and if so how? Now it is evident that any effective answer to these questions would be statements of opinion in some measure coloured by personal feelings and valuations. But it may reasonably be held that these feelings and valuations will themselves have been affected by the evidence of fact and the reasonings presented to the Commission, so that the opinions of the members even in matters so insusceptible of proof have some added value.

I. As regards the answer to the first question it will be generally agreed that in so far as the decline is due to the practice of abortion it is unhesitatingly to be condemned. The use of mechanical and chemical preventives of conception injurious to health must also be censured. While " the overpowering weight of religious opinion " is against the use of any such artificial preventives, yet some representatives of religion make a reservation as regards such methods as are not injurious to health.

Apart from the methods employed, the decline in the birth-rate at present is not eugenic, but dysgenic.

Restriction prevails most in the classes in which the conditions of family life are most favourable, and the largest families are found under those conditions, hereditary, environmental or both, which are most adverse to the improvement or even maintenance of the quality of the population. Even if there be no marked difference at birth between the child of the poor and the child of the rich, yet the difference of environment before and from the time of birth begins to produce inequality of opportunity, and also of capacity. One of the most pathetic and yet surely most persuasive appeals for every possible effort towards improvement is the fact that hundreds of thousands of children die annually, or suffer permanent injury, because of unfavourable conditions which might be prevented. The physical, mental, moral and social elevation of the class now most prolific by the influence on the birth-rate would counteract any tendency which might be feared to sacrifice the quality to the quantity of the population. Improved social conditions might discourage the multiplication of the unworthy, and would encourage the multiplication of the worthy, if this two-fold object were kept distinctly in view.

We do not advocate an unrestricted birth-rate, as we recognize that the natural functions of parenthood should be exercised under the control of affection, reason, conscience and racial obligation, with such voluntary restriction as the health of mother and child, the welfare of the family as a whole, and the moral duties of parents towards their children may impose. But we hold on the one hand that a stagnation or decline of our population would be injurious to the manifold interests of the nation, and that an increase, consistent with a continually rising standard of health, wealth, education, leisure and happiness for the whole population would in these same interests be desirable; and on

the other that by certain social and economic reforms, combined with moral and religious influences, it might be possible not only to increase but also to improve the population.

Some reasons may now be offered why an increase of the population so far as it is consistent with improvement seems desirable.

1. Human life, in itself, under healthy conditions, may be assumed to be desirable and valuable. The degree of its value will depend on its inborn character and its environment. An increase of population in a given country is, therefore, good, unless by reason of its size or constitution, it definitely lowers the normal standard of living. This it may do by producing excessive pressure upon the means of subsistence, either for the whole community or for some large class, or by compelling any of the people to live in overcrowded localities an unnatural or attenuated life. The strongest argument *prima facie* in favour of restriction, is the working-class contention that large families, so far as they imply an increase in the number of wage-earners, tend to reduce wages or to prevent their increase, so favouring a restricted distribution of wealth injurious to the normal value of life. In this country, owing to our productive powers, and the free access afforded by commerce to the produce of the outside world, the aggregate of wealth has been continually growing faster than the population, and the working-class as a whole have during the last three generations improved their standard of living. It cannot be pretended that the utmost and best use is being made of the soil within this country, which by the cultivation of lands now lying waste and by a more intensive culture of the land under cultivation could find employment for a much larger number of persons, and provide more abundantly the means of subsistence. In many districts grain for food instead of for the pro-

duction of intoxicants might be grown with great advantage to the community. Emigration if these conditions failed would provide an outlet for any surplus population. But in order that homes may be formed, after the pioneering work has been done, in the interests of the new lands and the old country, attention should be given to secure the proper proportion of the two sexes (see Dr. E. C. Snow's paper in the *Journal of the Royal Statistical Society* for March 1915). Improved education, organization, and legislation may bring about a better distribution of wealth, so enabling the growing volume of wealth to maintain an increasing aggregate of population on a higher level of physical, intellectual and moral life.

2. When we look to the British Empire beyond our own shores the possibility of an increase along with improvement of the population becomes manifest. There are vast territories over which the British flag waves, *e. g.* in Canada and Australia, which are very sparsely peopled, and for this reason are not yielding in food for human sustenance and raw material for human industry what they might. The rise of prices throughout the world can be met only by a much fuller development of the incalculable natural resources of such lands, a development which is waiting an increase of population. Can we resist the pressure of Asiatic immigration without provoking antagonism, if not worse, while we are not making full use of the lands which we are resolved to keep " white " ? If we value our national type should we not desire its diffusion? For the sake of the backward types even that they may be advanced by our influence to a better standard of life and thought, should we not desire the preservation and expansion of our people? Without any desire for imperial domination or commercial exploitation, or military subjugation of other races, Britain must, in view of what has been

advanced, regard with gravest concern her falling birth-rate, and take such practical steps as may be within her power to arrest the decline, and if possible restore the rate to a *higher figure.*

There is no evidence that the world's population is outrunning the natural resources; but on the contrary the presumption is that for their fuller utilization larger population is necessary, and thereby could be maintained with a higher standard of living. There was an increase of 75 per cent. in the production of wheat within the British Empire between 1901 and 1911, mainly due to the development of Western Canada (see Memorandum issued by the *Dominions Royal Commission*, December 3, 1915). In Canada, according to the Government Estimate, the wheat crop in 1915 was more than 50 per cent. higher even than that of 1911, and in Canada the population is two per square mile.

3. If, then, it may be assumed that within this country a larger population could subsist with a higher standard of living than obtains among the masses, and that this possibility is much extended, if we take into account the British Empire the third reason need not be dismissed as sentimental or unpractical. There is a natural desire for parenthood; the relation of marriage has parenthood as a normal purpose and result; the happiness of the home is greatly increased by the presence of children; the family affections have a moral value, and have the highest religious sanction; the teaching and training of children furthers the personal development of both parents. While the State should avoid all action which tends to break up the home, when there is what is worthy of that name, or which tends to weaken the sense of parental responsibility, it is in the interests of the State as far as is practicable to remove all conditions, physical, economic or social, which make parenthood an almost intolerable burden, especially on the

mother, and in which the very hopelessness of a proper discharge of parental obligations breeds a recklessness in incurring them. The assertion seems warranted that when there is more hope there is also more sense of duty in parenthood. Such reforms are practicable as will increase the quickening sense while decreasing the deadening weight of parental responsibility. All we plead for is such conditions as will not repress the parental desires and affections, and will encourage the recognition of parental obligations.

We do not consider it necessary for our present purpose to discuss fully the wider issue whether marriage and parenthood can be regarded as a personal and social obligation, unless where celibacy is on moral or religious grounds recognized as the individual vocation or where there are cogent medical reasons against marriage and parenthood. All that seems necessary for our present purpose is on the one hand to show that such restriction is not in the general interest, and on the other to promote such conditions as will make it unnecessary in the particular interests either of parents or children. (A tax on bachelors above a certain age could not be justified as a penal measure, although it might be advocated on the grounds of greater ability to bear an additional burden because of freedom from the greater parental liabilities.)

II. In stating some of the changes in economic or social conditions or in public opinion and general custom which in our judgment would tend to promote the object we have in view, we desire to avoid even the appearance of political partisanship, and accordingly we abstain from the advocacy of definite measures, on which acute differences of political opinions exist, and confine ourselves to such general methods as should approve themselves to most "men of good will." Some of us personally would be prepared to go further than

we have ventured here. There may be objections in some minds on other grounds to some of our proposals, but we put them forward for consideration as the means which to us appear as practicable to secure the desirable end.

1. The "minimum" or the "living" wage is being advocated by men of all parties, and it needs here only to be mentioned as a reform which would tend to improve the conditions of family life. So also would greater regularity and security of income, as by insurance against unemployment.

2. The suggestion is worth considering that State bonuses for families when the earnings do not amount to £100 or £120 a year, should be given for all children who attain the age of fourteen years to secure further education, or a better start in life. This might be done in the form of a State-aided Insurance. For instance, a penny a week during the child's life to be returned with such sum added as might be agreed upon, on the attainment of the fourteenth year.

3. The means of husband and wife should be considered separately in computing the income-tax, as the present arrangement penalizes marriage; and within the range of incomes say below £600 or £700 per year, there should be substantial remission of the tax on parents for each child.

4. The facilities for a good cheap education above the standard of the elementary school should be greatly increased; and in all schools scholarships or aided education should be given to children of large families.

5. It should be made possible for families of numerous children to obtain housing with suitable sleeping accommodation without having to pay exorbitant rents. On other grounds, too, improved housing for the working-classes both in town and country is a crying necessity. Much injury to health is caused by children having to

live in overcrowded, ill-lighted, ill-ventilated dwellings, both in towns and in the country. "There can be no doubt that consumption may be bred in the cottage dwellings almost to the same extent as in the town slum tenement, and phthisis is very prevalent in our rural counties." (Medical Officer of Health for the County of Bedford, *Report* 1911.)

6. In order that the means of subsistence may be provided for the population so as to allow of a rising standard of living the development to the full of the natural resources of the mother-country as well as of the Dominions beyond the Seas should be encouraged, as for instance, by the improvement of the conditions of land tenure, and the methods of agriculture.

7. While there should be censure of the recklessness of the poor who assume parental responsibility without the capacity or the effort to discharge it worthily, there should be no less a condemnation of the selfishness, or social ambition, which leads some of the well-to-do to restrict their families, so that they may make more display, and live in a luxury inconsistent with health and happiness. Some of the changes already advocated would deprive the one class of the excuse for their recklessness, and the other of the argument that prudence demanded the restriction of their families.

8. The fear of the pain of childbearing is admitted as one of the reasons why some women refuse motherhood. They may be assured that medical knowledge and skill can so relieve travail that it can be made at least bearable. More natural conditions of living would make this natural function less painful and perilous than it sometimes is to women living under the artificial modern conditions.

9. It is very desirable that an informed and intelligent public opinion should be promoted regarding the ways in which with improvement in quality there might be

increase in the birth-rate, or at least its decline might be arrested.

10. The popular sentiment regarding the value and sacredness of family life and against all forms of selfishness which to-day imperil this institution should be stimulated and the duty of fathers to bear a larger share of the burden of parenthood should be urged, as on many mothers it is now an almost intolerable load.

11. Religious and moral teachers of the nation should be urged to consider more thoroughly than has yet been done the problems involved, so that more certain and competent guidance as regards duty may be given. The following are some of the questions which deserve more thorough and general consideration than we have been able to give to them.

(1) Is parenthood the only valid reason for marital relations?
(2) What motives justify the restriction of the family?
(3) Is any mode of restriction except voluntary abstinence from marital relations moral and religious?
(4) How would such voluntary abstinence affect the health, comfort and happiness of the relations of husband and wife?
(5) How is the character of the children in a home likely to be affected by the numbers?

12. While we are mainly concerned with the reduction of the birth-rate, it seems relevant to our inquiry to call attention to the difference between the crude birth-rate and the effective birth-rate (the actual addition of adults to the population) due to the appalling infantile and child mortality, which must be ascribed to preventable causes; and to urge the consideration that if it is desirable that children should be born, it is no

less, if not even more, desirable that the children born should have a chance of life and health. In addition to all this, we feel that the care of the mother before child-birth is as important as the care of the child after its birth, because it must be borne in mind that even more children perish in the nine months before birth than in the first twelve months after birth. The society which wishes to survive and advance must hold in its tender regard and shield by its constant care the mother and her babe.

Consuelo Marlborough.
H. R. Birmingham.
Willoughby de Broke.
Marie Willoughby de Broke.
Laura Aberconway.
J. Barking.
W. F. Brown.
J. Macdonell.
G. Sims Woodhead.
J. W. Ballantyne.
Alfred T. Schofield.
C. W. Saleeby.
Mary Scharlieb.
Florence E. Barrett.
Agnes Savill.
Ettie Sayer.
Florence E. Booth.
E. C. Morgan.
A. E. Garvie.
H. Gollancz.
R. F. Horton.
F. B. Meyer.
Thos. Phillips.
A. G. Gardiner.

NOTE OF RESERVATION

I HAVE signed the Report and the addition thereto, subject to the following reservation, which, as representing the Roman Catholic Church, I consider essential—

> The Church forbids the destruction of the product of conception even when the life of the mother is at stake; and also all anti-physiological methods of preventing conception.

W. F. BROWN.

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PART II

THE EVIDENCE

Minutes of Proceedings of the COMMISSION OF INQUIRY

into the social, economic and racial significance of the falling birth-rate, and to suggest remedies.

First Day

Meeting.—Friday, October 24, 1913, at 3.30 p.m.,

at Bishop Boyd Carpenter's House, 6, Little Cloisters, Westminster Abbey, London, S.W.

Chairman.—The Right Rev. Bishop Boyd Carpenter, K.C.V.O.

Witness examined.—Dr. C. V. Drysdale, Secretary of the Malthusian League.

Précis

As representing the Malthusian League, which has carried on a propaganda in favour of family restriction among the poor and unfit ever since the Knowlton or Bradlaugh and Besant trial of 1876–7, in the belief that it was imperatively demanded for the physical, mental, and moral improvement of the individual and the nation, I should first like to express my gratification at being invited to give evidence before you as well as the very great pleasure which we feel that this vitally important question is at last to receive full consideration by a weighty and impartial tribunal. Although enthusiastic and convinced propagandists of the

cause we have adopted, we are none the less fully alive to the importance of the most rigorous scientific investigation of the question. The excellent Memorandum which your Commission has drawn up almost exactly meets our views as to the lines on which such an investigation should be conducted. So far as possible, I will adhere to the order of this Memorandum in my remarks.

Before dealing, however, with the specific questions in the Memorandum, it is perhaps fitting that I should say a word concerning the Neo-Malthusian doctrine and the propaganda of the Malthusian League, as considerable misconception has existed concerning them. The Neo-Malthusian movement has as its central principle the doctrine of Malthus that unrestricted reproduction inevitably leads to pressure upon subsistence, with its consequences—poverty, starvation, prostitution, disease, and war; and it seeks to find a practical solution of this difficulty in harmony with physiological and medical knowledge, and with a view to the economic and eugenic betterment of the human race on earth. It frankly and openly differs from its great teacher as regards the nature of the remedy, and on that account it has frequently been accused of misappropriation of his name; but there has never been the slightest attempt to conceal this difference, and we have every evidence that the membership of the League would have been very much greater had the doctrine of Malthus not been insisted upon. The term Neo-Malthusianism was conferred upon the new doctrine by Dr. S. Van Houten, late Minister of the Interior of the Netherlands, to mark the departure from the proposition of Malthus, that of celibacy or of late marriage with complete self-restraint as a remedy. On the grounds of historical evidence and physiological study the Neo-Malthusians rejected this proposition as being impracticable and productive of the greatest possible evils to health and morality; and they adopted as a remedy the recommendation of almost universal early marriage combined with limitation of the family within marriage to such children as the parents could satisfactorily provide for by any such means as were found uninjurious to health. The English Malthusian League has confined its operations almost exclusively, until the beginning of 1913, to the exposition of the economic, moral and eugenic aspects of the population doctrine, although it has been constantly reproached for its refusal to give information concerning preventive devices. Following, however, upon recent authoritative medical pronouncements in favour of such devices, the League has recently instituted a

practical propaganda, with special precautions against abuse, which will be described later.

The other great misconception concerning the movement which it seems necessary to refer to is that it has aimed simply at reducing the numbers of the people, regardless of morality, their quality, and the national welfare, or of anything but the economic welfare of the parents. So far from this being the case, Neo-Malthusians have not aimed at reducing population, but only at reducing unnecessary death which injures the community without adding to its numbers. They have been most keenly alive to moral questions, and at the very outset of their movement they earnestly discussed eugenic problems and laid down lines for practical race improvement which they see no reason to modify to-day, and with which the various eugenic movements are steadily coming into greater accord. That the results of family restriction up to the present—in most countries but Holland—have been anti-eugenic we are quite willing to agree; but this is due entirely to the action of the educated classes, who, instead of listening to the appeal of the Malthusian League to teach family limitation to the poor and unfit, took advantage of the knowledge of contraceptive methods for themselves and put every obstacle in the way of its extension to the people among whom it was most needed on humanitarian and eugenic considerations.

It may serve to clear up these and other misconceptions if I give a definition of Neo-Malthusianism which appears to me to embody the principles which we have steadfastly adhered to—

Neo-Malthusianism is an ethical doctrine, based on the principle of Malthus that poverty, disease, and premature death can only be eliminated by control of reproduction, combined with a recognition of the evils inseparable from prolonged abstention from marriage. It therefore advocates nearly universal early marriage together with a selective limitation of offspring to those children to whom the parents can give a satisfactory heredity and environment so that they may become desirable members of the community. It further maintains that a universal knowledge of hygienic contraceptive devices among adult men and women would in all probability automatically lead to such a selection through enlightened self-interest, and thus to the elimination of destitution and all the more serious social evils and to the elevation of the race.

Up to a few months ago, as above stated, the Malthusian League has confined its propaganda almost entirely to endeavouring to awake the conscience of the educated

classes to a sense of their duty towards the poor. In the early days of the movement strenuous and, at first, successful attempts were made to interest the poorer classes directly, but the opposition which quickly arose rendered the continuance of this policy impracticable, and it was only at the commencement of the year 1913 that it was deemed possible to start an open-air campaign in one of the poorest districts of South London. The response was so gratifying and the demand for practical advice so persistent, that the League determined at an early date thereafter to issue gratuitously a leaflet describing the most hygienic methods of limiting families, subject to a declaration by applicants that they were over twenty-one years of age, married or about to be married, that they were convinced of the justification of family limitation, and that they held themselves responsible for keeping the leaflet out of the hands of unmarried people under twenty-one years of age. The scheme only came into operation on September 20th, 1913, but the applications received show unmistakably that the poor and the debilitated are most anxious to adopt family limitation, and are deeply grateful for the necessary information. That their adoption of it is not for selfish motives is evidenced not only by the letters received, but from the fact that most of them are keenly desirous of helping others to get the same information. This is of the greatest importance, as the only really plausible eugenic objection to Neo-Malthusian teaching was the contention that the least fit would always be too reckless to adopt it. The brief experience which our League has had on this point confirms that of the Dutch Neo-Malthusian League (the only one that has been permitted to give such instruction to the poor, which it has done with the co-operation of medical practitioners and trained midwives) and shows most clearly that there is no justification whatever for the belief that the less fit elements of society will reproduce faster than the fitter elements, if the knowledge of simple and hygienic means of restriction becomes universal.

Notwithstanding the fact that, in spite of its efforts, the limitation of families has up to the present been on dysgenic lines, the Malthusian League cannot profess regret that its limitation has occurred. On the contrary, it holds—as is becoming increasingly recognized—that the great fall in the death-rate which has taken place in this and other countries of falling birth-rate, could not have possibly occurred without it. Had the birth-rate of 1876 not been reduced, there can be little doubt that the economic pressure would have

soon become so terrible as to lead to revolution, and that there would have been no possibility of studying eugenic problems. In saving the victims of a disaster it would, no doubt, be better that it should be done on eugenically selective lines, but few would suggest that the relief should not have been undertaken if it led to dysgenic selection. In horticulture thinning out is a necessary preliminary to selection, though it would be better that the two processes were simultaneous. As the death-rate falls from its earlier high value of 22 per 1000 and approximates to its natural minimum of 9 or 10 per 1000 when want is overcome, the Neo-Malthusian problem changes from one in which the reduction of quantity is most urgent to one of quality. In seven or eight years at the present rate of progress, or in four or five years if the educated classes will co-operate, the quantity question will have been overcome, and Neo-Malthusianism will then become identical with negative eugenics, *i. e.* the selective limitation of offspring in proportion to the hereditary unfitness of their parents, leading to a gradual elimination of physical, mental and moral defect, and the steady improvement of the race through the discarding of its inferior elements.

It will be seen from the above that Neo-Malthusians, while still convinced of the necessity for a further decline of the birth-rate, are most anxious that it should be properly directed; and they will be most grateful for all advice and co-operation in so directing it.

[The witness then dealt with official statistics as to the extent and character of the decline in the United Kingdom and France which are given at length in Dr. Stevenson's own evidence, to which the reader is referred, p. 350–372.]

ALLEGED CAUSES OF THE DECLINE

Physiological

1. There is little evidence which I could give the Commission on this point which is not fairly well known, and which will not be better given by others. The influence of town life upon the number, age and fertility of marriages does not appear to be very marked in this country, and it is a remarkable fact that the vital statistics of London have always shown a very close resemblance to those of England

and Wales as a whole.[1] The same may perhaps be said of France, excluding Brittany. But in Germany the contrast between the fertility of the towns and the country districts is extraordinary. The fall of the birth-rate in the principal towns, Berlin, Hamburg, Dresden, Munich, etc., is phenomenal, and it appears as if these towns will soon fall below France in fertility. In East Prussia, where the average of education is lowest, the birth-rate is still very high. There can be no doubt whatever that ignorance and recklessness at the present time are essential to high birth-rates, and Dr. Bertillon shows this very clearly in his studies of France. The birth-rate of Brussels in 1912 fell to 16·6 per 1000, or actually below that of Paris (16·8 per 1000). It is also fairly clearly established that in most Western European countries the marriage-rate and age at marriage have comparatively little effect on the birth-rate, and that the preponderating factor is the fertility of marriages. This is well brought out in the recently issued Report of the Registrar-General on p. xxii. where it is stated that (between 1876–80 and 1911) the increased proportion of women at the reproductive ages should have resulted in an increase of the birth-rate of 2·86 per 1000, and that the decreased proportion of married women should have produced a fall of 1·1 per 1000, while the actual fall of the birth-rate was 10·98 per 1000. This means that the effect of diminished fertility would have been as high as 12·74 per 1000, *i. e.* considerably more than the actual fall of the birth-rate.

All the evidence goes to show that the modern decline of the birth-rate is almost entirely due to prudential restriction of births within marriage.

2. Turning to the motives for such restriction, I am gratified to observe the order in which they have been placed on the Memorandum, as many writers on the subject have regarded the last, *i. e.* selfishness, as the only conceivable explanation. So far as our experience goes, the first three motives mentioned have been practically universal, and we have never come across a case where family restriction was practised from what could be legitimately called selfish motives. There are great numbers of cases in which women suffer from ailments which, although not serious in themselves, are a decided reason for abstention from parenthood, *e. g.* varicose veins. The desire to do the best possible for each

[1] In the Registrar-General's Annual Summary for 1912 it appears that the birth-rate in the country districts was about 2 per 1,000 *less* than in the great towns, and the death-rate was lower by the same amount.

child that is born is admitted by such a strong opponent of family limitation as Dr. Bertillon to be *the* ruling motive, certainly as regards French parents; and it is worthy of note that family restriction is generally carried out to the most rigid extent by those educated persons who have themselves been members of large families. As regards home life, I am personally inclined to think that the ruling question is the economic one, and that although educated women would naturally always desire to be free from the burden of families of six or more children, they restrict their families to a much greater extent for economic reasons. Any one who knows the lives of middle-class people is aware that in the great majority of cases there is a very severe strain to keep up with the obligations which are imposed upon them, especially in these days of high taxation and social movements. A very considerable proportion of educated men and women at the present time are actively interesting themselves in attempts to improve the conditions of the masses, and such persons when married frequently renounce parenthood to a greater or less extent in order to free themselves for such work. In communities like Letchworth or the Hampstead Garden Suburb, where I have personally resided, families of more than two children are rare among the educated classes, but nearly every one is giving time, energy and money to the reform movements which they believe to be urgently needed in the interests of the community. If poverty and large families were banished from the working classes, there can be little doubt that the educated classes would have larger families than they do at present. It can hardly be said that those who at present marry and refrain from having many children because they feel that they can do more good to the community by devoting themselves to social work, are more selfish than those who in earlier times retired into convents or monasteries for the good of their own souls and left no children behind them.

As a frank upholder of the women's emancipation movement, in the belief that the interests of the race cannot be properly safeguarded without the co-operation of women, I consider their emancipation from excessive and undesired maternity absolutely essential; and I know that the leaders of the movement on the Continent are nearly all agreed on this point, and are many of them active workers in the Neo-Malthusian cause.

Among the poorer classes the desire or motive for limitation wants no explanation. About 2,500,000 of the adult

workers in this country at the present time have wages of not more than twenty-five shillings a week, and on such an income it is absolutely impossible with the present cost of living for a family of more than three children to be decently brought up, even if the parents are robust. If they are not strong, the misery of large families is intensified. The experience of thoughtful persons who have worked among the poor of our large towns cannot fail to have taught them that family restriction is the only possible means by which health and decency can be maintained in the majority of instances.

Of course a League such as ours naturally comes into touch with those whose motives for restriction are unselfish, and I have no intention of denying that some restriction may possibly be practised for selfish reasons. But I should like to say one word in defence of certain women whom Father Bernard Vaughan and others are never tired of denouncing, the women of the upper classes who are childless and lavish their affection upon toy dogs instead of children. I am not personally acquainted with any such ladies, but I have an intense objection to sweeping denunciations of women by men who are much more responsible for these phenomena. Where selfishness is the motive for restriction, it is far more generally due to ambition or to love of luxury on the part of the husband, and the wife is frequently forced to play an artificial rôle on account of his political or social ambitions. But the really serious matter is this, that irregular lives and venereal disease are extremely common among the wealthier men, and that this is the principal cause of sterility either in the husband or in the wife, who has become infected through him. Those who denounce such women ought to remember that the love they show for gaiety or pets may be the manifestation of maternal desires which have been denied them. We have been recently told that there are 500,000 fresh cases of syphilis yearly in this country and three times that number of cases of gonorrhœa, and while men are chiefly responsible for introducing these infections into their homes, I object to their criticism of the women. Lastly, even if it were true that a great deal of the restriction among the wealthier classes was due to want of love for children, it can only be said that it is surely better that the race should not be recruited from such parents.

3. As to methods, the little book which I have just written on *The Small Family System* contains the principal evidence which I have been able to collect upon this subject. The general conclusions are (*a*) that the vast bulk

of restriction is due to "artificial" rather than to "moral" restraints (accepting the terminology under protest); (*b*) that medical and other authorities were until a few years ago almost entirely condemnatory of such methods, but have since become remarkably less so, and in many cases strong advocates of such methods; (*c*) that the evidence of vital statistics shows unmistakably that the greatest benefit to the health of the community has followed the introduction and employment of such methods, and that in New Zealand, where preventive devices are hawked from door to door, and where an attempt at legislation against them was rejected, the general and infantile mortality are the lowest in the world; and (*d*) that the general morality of the community, as tested both by testimony and the evidence of statistics, has improved with the falling birth-rate. Until a few months ago only two or three medical practitioners were members of the Malthusian League in this country (there are large numbers in the Dutch Neo-Malthusian League), but more have joined since the issue of our practical leaflet, and a satisfactory number have written in approval. Only within the last few days the American Society of Medical Sociology has affiliated to the International Federation of Neo-Malthusian Leagues.

As the Commission proposes to take evidence with regard to the effects of such devices, I would like to express the hope that the greatest care will be taken to avoid any confusion between the results of prevention of conception on the one hand and of abortion or attempted abortion on the other, as the whole subject has been seriously obscured by such confusion. I should also like to mention that, so far as we know, the only persons who have had a really extensive experience of the effects of preventive devices when employed under medical direction are the Dutch physicians, Dr. Aletta Jacobs, of Amsterdam, and Dr. J. Rutgers, of the Hague. The former has for many years had a gratuitous clinic, in which she has instructed over 2000 poor women in the use of preventive devices. (It may incidentally be mentioned that Amsterdam has now the lowest death-rate and infantile mortality of any capital in the world.)

As regards abortion, I may say that the attitude of the Neo-Malthusians, at any rate in this country, is absolutely against any non-medical interference when pregnancy has once commenced. They accept the evidence that all attempts at abortion by drugs or unskilled interference are most dangerous to the health of the mother, and, being usually unsuccessful, seriously injurious to the offspring.

On the other hand, they are aware that such attempts are lamentably common (principally by drugs in this country), and contend, as the Hungarian Medical Senate and other high medical authorities have admitted, that a universal knowledge of hygienic and reliable contraceptive devices is the only possible method of eliminating the practice. We have no figures as to the frequency of abortion in this country, but Dr. Robinson has stated that probably from one to three million abortions are practised annually in the United States.

EFFECTS OF DECLINE OF BIRTH-RATE

1. The eugenic side of the question has been mentioned in the introductory remarks and is dealt with in a pamphlet, "Neo-Malthusianism and Eugenics," accompanying this statement. I would only add that since this pamphlet was written I have come across further evidence as to the serious effects of large families upon the health or survival of the children. In Dr. Rutgers' *Rassenverbesserung* is reproduced a table by Dr. A. Ploetz, President of the German Eugenic Society, in his *Rassenhygiene*, p. 59, giving particulars of the infantile mortality among 26,429 children of 5,236 working-class families in Saxony. In the families which had more than two children the infantile mortality in the first year of life was as follows—

Of all first-born children	. . . . .	22·9	per cent.
„ second „	. . . . .	20·4	„ „
„ third „	. . . . .	21·2	„ „
„ fourth „	. . . . .	23·2	„ „
„ fifth „	. . . . .	26·3	„ „
„ sixth „	. . . . .	28·9	„ „
„ seventh „	. . . . .	33·1	„ „
„ eighth „	. . . . .	33·2	„ „
„ ninth „	. . . . .	36·1	„ „
„ tenth „	. . . . .	41·3	„ „
„ eleventh „	. . . . .	51·4	„ „
„ twelfth „	. . . . .	59·7	„ „

Confirmatory evidence as regards these figures comes from Denmark and the United States. It appears, therefore, that only 40 per cent. of twelfth-born children survive their first year. Many eugenists appear to adopt the criterion of survival as evidence of fitness, and on that ground the first three or four children appear the best, and the subsequent

ones progressively inferior. I do not accept this criterion, for I believe the principal factor in these results is the increasing economic difficulty as the family becomes larger. But whether it be due to heredity or to environment, the serious disadvantage of large families is obvious. The fact that the infantile mortality has long been the lowest in New Zealand, where preventive devices have actually been hawked around the country, appears conclusive evidence against their having any deleterious effect upon offspring.

The alleged eugenic effect of a high infantile death-rate, like that of a high general mortality, is being rapidly exploded. If no humanitarian ideas or customs prevailed it might be true, but high mortality of every kind, whether due to war or poverty, is now pretty clearly recognized to be dysgenic under modern social conditions.

2. The general effect of artificial restraints upon health has been discussed in *The Small Family System.* By " natural " restraints I presume is meant sexual abstinence except for procreation. Neo-Malthusians generally hold this to be not only very rare, but in the great majority of instances definitely injurious to the bodily and mental health of both men and women. I am aware, of course, that it is a much-disputed point, and that the great mass of medical opinion was against our view until a few years ago, and, indeed, may still be so in this country. On the other hand, just as there has been a remarkable change of medical opinion with respect to contraceptive methods, so there is a rapidly rising body of medical opinion in favour of the decidedly evil effects of sexual abstinence,[1] and more still in favour of the absolute imperiousness of sex-hunger in most normal individuals. In our opinion the greater frequency of nervous disorders at the present day, instead of being due to preventive devices, as is generally contended, is caused by the smaller frequency and greater postponement of marriage. We firmly believe that the general knowledge of preventive methods would lead to earlier and more general marriage, and that this is the only way to counteract nervous affections. The postponement of marriage in the case of women appears to have a most unfortunate result, as it is the probable cause of " sexual frigidity." This has a most painful effect on the happiness of marriages, and is lamentably common. Again, it is becoming recognized that a considerable amount of nervous disorders have

[1] See the writings of Nystrom, Rutgers, Max-Marcuse (President of the German Society for the Abolition of Venereal Disease), W. J. Robinson, Freud, and others.

their origin in congenital or acquired venereal disease, and a recent paper in the *Lancet*, by Dr. Gordon Mitchell, showing that a positive Wassermann reaction or stigmata of syphilis were present in about 20 per cent. of mentally defective cases, is strongly confirmatory of this view.

3. As regards the effects on the characters of married people, and on home life, little need be said. We know, of course, that the majority of middle-class families now consist of very few children, and it can hardly be said that home life is unsatisfactory, except perhaps in single-child families. Most writers testify very strongly to the affection and union prevailing in French home life. As to the children, it is probably true that in single-child families there is a tendency to spoil the child and make it less self-reliant. But Neo-Malthusians are not advocates of the single-child family, except in cases of great poverty, or where danger to the mother is to be apprehended from the birth of a second child. In the former case the child is not likely to be spoilt. The immense improvement in the character of home life produced by family limitation among the artisan class is unquestionable, and is testified to, in the case of France, by Dr. Bertillon himself.

ECONOMIC AND NATIONAL ASPECTS

1. The deplorable results of high birth-rates in countries where the land is fully cultivated needs no insisting upon. India and China are object-lessons to the world in that respect. The enormous death-rate of India is sufficient to show this, even without the testimony of observers, like Sir Frederick Treves, or of the famines. China has no figures, but a vivid picture of the misery of its people was given by Prof. Edward Ross in the *Century* magazine for July 1911, under the title "The Struggle for Existence in China." A similar picture, as regards Egypt, has recently been given us by Mr. T. P. O'Connor, M.P.

2. As regards the economic effects of a surplus of workers, I have attempted, in a paper on "Wages and the Cost of Living," to demonstrate therein that the population difficulty is the principal cause of the labour unrest of the present day, and that the adoption by the workers of restriction of their families to those children they can decently provide for would seem to be the only practicable means of improving their lot. That the overcrowding

difficulty is intimately related to the size of families is manifest; and that there must be a serious drain on the community in feeding and otherwise providing for children who never come to maturity is also obvious.

3. As regards economic conditions in countries with a declining or stationary population, evidence is given by the Board of Trade figures that in Ireland, where the population has been slowly declining for some years past, the wages of agricultural labourers have risen much faster than in England or Scotland, and that France, with its very slowly rising population, is one of the only countries in which wages have more than kept up with the cost of living. On the other hand, in Holland (the only country where Neo-Malthusianism has been given an opportunity of diminishing the excessive birth-rate on eugenic lines, *i. e.* in the reduction of the fertility of the poorest classes), a considerable rise in wages and general prosperity appears to have taken place side by side with an unprecedented increase of population. This justifies the Neo-Malthusian contention that it is the extension of the knowledge of preventive methods to the poor and unfit which is so imperatively demanded. The general level of efficiency may thus be so greatly raised as to enable a country actually to support much larger annual increases of its population.

4. The fear of a disproportionate increase of population in other countries is in many cases a most fallacious one. The great battles of the world from Marathon and Salamis to the Chino-Japanese and Russo-Japanese wars have most frequently been won by the smaller nations and armies, and a Berlin professor who has just been lecturing on this subject at the Holborn Hall, has declared that, even in war, quality counts more than quantity. Wealth and national reserves also probably count as much. But apart from this, the point must again be most strongly insisted upon *that the increase of population of a country has nothing to do with its birth-rate.* The increase of population depends on its power of *supporting*, not of *creating*, new people, and it is certainly an index of the progress of the country. But it is an *effect*, not a *cause*, of progress, and however greatly an increase of population might be desirable it will not be obtained by an increase of the birth-rate, but only by an increase of the production of the country. Even in France, with its low rate of increase, the death-rate is 18 per 1000 instead of 10. The rate of increase of the French population could be multiplied five to ten-fold without the slightest increase of its birth-rate, and those who ask for an increase

of the birth-rate in that country must be asked first to show how its death-rate may be lowered, *i. e.* how it could increase its production.

The scare of the " Yellow Peril," based upon the " glorious fertility of the East," as it has been called, vanishes absolutely when it is realized that the net increase by survival is probably less than 5 per 1000 per annum, while that of Europe is 12 per 1000, *and is getting larger as the birth-rate falls.* (See Fig. 30 of *Vital Statistics.*)

In conclusion I must specially draw the attention of the Commission to the example of Holland. The Neo-Malthusian movement has spread to a large number of countries, but Holland is the only country in which it has been welcomed by the Government and been permitted to work according to its own ideals. The Dutch Neo-Malthusian League was founded in 1885 under the auspices of Dr. S. Van Houten, the Minister of the Interior, of Heer N. G. Pierson, the Finance Minister, and other prominent persons. Not long after its formation it commenced to give practical information concerning contraceptive methods, and its work was found of such value that in 1895 it was recognized by Royal Decree as a society of public utility. In 1913 it has a membership of about five thousand persons, including a considerable number of medical practitioners; and it carries on a practical propaganda among the poor, with the aid of six doctors and about fifty trained midwives, who advise the poor women. In practically every large town in Holland this help can be readily obtained; in other places a postcard to the head office brings a practical pamphlet by post in an unsealed envelope. I have already mentioned that the vital statistics of Holland show the most gratifying improvement of any country (see Fig. 4, p. 60, *The Small Family System*), and that Amsterdam and the Hague, where the work has concentrated, are now the healthiest large towns in the world, according to the Registrar-General's Summary.[1]

	Birth-rate.	Death-rate.	Infantile Mortality.
Amsterdam, 1912	23·3	11·2	64
The Hague, 1912	23·6	10·9	66

Wages have risen, the increase of population is now the highest in Western Europe, and the stature of the people (according to a paper by Dr. Soren Hansen at the Eugenics

[1] See Registrar-General's Annual Summary, 1912, p. 57.

Congress) has increased by four inches within the last fifty years. The official figures for the recruits drawn by lot for the Dutch Army show that since 1865 the proportion of young men more than 5 ft. 7 in. in height has risen from 24½ per cent. to 47½ per cent., while the proportion of those less than 5 ft. 2½ in. has fallen from 25 per cent. to under 8 per cent. This reveals most strikingly that the falling birth-rate in Holland has been eugenic rather than dysgenic, and it may confidently be claimed that the result of family restriction in Great Britain would have been similar had the authorities taken the same attitude as regards fostering and directing it as was done by the Dutch statesmen. An investigation of the trend of the vital statics of our own country indicates that we have so far been on the wrong track, and that the rate of increase of population is diminishing—not because of the declining birth-rate—but because of the determined policy of keeping the information *re* family limitation from the poor and taxing the middle and upper classes to support the large families of the less fit, thus leading to an increasing dysgenic selection. If the result of this Commission is to show that the example of Holland should be adopted in this country, the Malthusian League is confident that in five or six years' time the principal evils from which our people are now suffering will be removed, and the prosperity of the country rapidly increased.

If the idea that universal early marriage was to be encouraged, and that there was no longer the economic danger of large families against it, sexual irregularities, illegitimacy, prostitution, and venereal disease could be enormously diminished in a very few years, and no other attempts at reducing them are likely to have any appreciable success. The fact that the illegitimate fertility of unmarried women has been reduced to one-half in this country since the fall of the birth-rate set in is at least a good sign, while in some of the Dutch towns the fall has been even more marked.

Dr. C. V. Drysdale called.

Chairman. Before any other questions are put to you, may we know, are you here personally, or may we take it that you represent officially your Society?—*A.* I have no mandate particularly from the Malthusian League, but I think you may take it that what I say would be officially confirmed at any time.

Dr. Stevenson. I should like to ask Dr. Drysdale generally what level of birth-rate he would consider desir-

able in this country?—*A.* At the present time about 19 to 20 per 1000, or less.

Q. When the birth-rate stood at about that level in Ontario, was that a desirable level for Ontario, or do you think the circumstances of Ontario being a young country, with plenty of room for expansion, would warrant a different birth-rate?—*A.* I am quite decided Ontario should at present have only that birth-rate; when Ontario did raise its birth-rate its death-rate increased; it gained no increase of population thereby, so I am absolutely definite in that case.

Q. That leads me to put the question whether you have noticed that the increase of death-rate attributed to rise of birth in Ontario was due to overestimate of population? On page 111 of the Registrar-General's Report it appears that the population of Ontario in 1910 was 2,239,000, and it had been well over two millions since 1892, but in 1911 it went up to 2,523,000.—*A.* This is the latest Report; I have seen it, but my statement is based on the previous year's Report.

Q. Consequent upon that, the birth-rate went up from 21·10 in 1910 to 24·7 in 1911?—*A.* And the death-rate too!

Q. The death-rate came down from 14·0 to 12·6?—*A.* I might just say on that point that in the city of Toronto, where I take it the same error is not likely to have arisen, the same effect has been very marked.

Q. The point suggests the importance of not accepting the published rates indiscriminately, without having regard to the intrinsic evidence that can be obtained as to their reliability from the line of estimated populations, and so forth. Then, I would like to put it to you whether the possibility has occurred to you that in the other countries of increasing birth- and death-rates—Japan, Ceylon, and Bulgaria—registration is very incomplete, and that the gradual improvement in registration would account both for a rise in birth-rate and death-rate?—*A.* I think that is quite a possible thing.

Q. I notice you maintain that the increase of population of a country has nothing to do with its birth-rate; it depends on its power of supporting, not of creating new people?—*A.* Yes.

Q. It struck me that in one or two cases that might seem almost inapplicable; for instance, the tendency in recent years of the population of Australia to increase comparatively slowly would perhaps seem to be related to its lower

birth-rate, because surely the proposition would be untenable that in Australia there is not ample power to support a very much larger population than we find in Australia at present?—*A.* I cannot accept the proposition that Australia is capable of supporting a great deal more than its own population. I must put forward here a very important point; I do not pretend that this country even is over-populated, or that any country in the world is over-populated in the sense that it has got as many people as it can possibly support. What I am absolutely certain of is that no country can, from year to year, increase the amount which it produces by enough to hold all the people that can be born, and Australia apparently has just got to the point; its birth-rate has just descended to 10 per 1000, but there has been a correlation between the birth-rate and the death-rate in Australia. I do admit that, at the present moment, it has just got to the point of balance.

Q. I think you referred just now to the possibility of a death-rate of 10 per 1000. Has it not occurred to you that such a death-rate must demand very special circumstances before it is capable of attainment?—*A.* Such as what?

Q. If the population of a country were stationary, the death-rate of 10 per 1000 would imply that people lived to an average of 100 years?—*A.* Precisely.

Q. You refer to New Zealand having a birth-rate in some years as low as 9 per 1000, and speak of a natural minimum of 9 or 10 per 1000?—*A.* The natural minimum on an increasing population could easily be 3 or 4 per 1000. I am now talking of a natural minimum with a comparatively slowly increasing population of about 5 or 6 per 1000, such as we are likely to have, say, in this country or in most European countries in a comparatively few years from now.

Q. And you think we might get our birth-rate down to as low as 3 or 4 per 1000?—*A.* No; our death-rate. I take it you would not consider an average longevity of as much as seventy years, or even eighty years, as outside the bounds of possibility. With an average longevity of seventy or eighty years you could have, if the population were still to increase, a death-rate of only 4 or 5 per 1000 or less.

CHAIRMAN. Does that mean that the lower the birth-rate, the longer we shall live?—*A.* Certainly; yes, most decidedly; that is our reason for advocating a lower birth-rate.

Dr. Stevenson. I have the natural increase of New Zealand during the past ten years and the actual increase; the natural increase is under two-thirds of the actual increase?—*A.* Yes; just about two-thirds. I made an examination of a few different countries which seemed to bear out the contention I made, but I fully agree about half the countries in the Registrar-General's Report are affected more or less materially by emigration or immigration.

Q. You refer to the Registrar-General's Report that the birth-rate in the south of England is lower than that in other parts of the country, and say, "This is readily accounted for by the large proportion of domestic servants."—*A.* That only means that the fertility of domestic servants is lower; it is our experience that domestic servants, especially amongst the large families, are very much instructed in these matters.

Q. I should like to ask why, dealing with mean age at marriage, you bring out the fact that in England the mean age at marriage has increased, and that in France the mean age at marriage has diminished?—*A.* I believe that to be true.

Dr. Greenwood. Dr. Stevenson has asked you questions about the facts, as it were, and he is naturally an authority on those; I should like to ask you a few questions about your methods, because you and I are on common ground there; official knowledge is not required. With your evidence, you have a Table of correlation coefficients. We agree that these coefficients of correlation do not necessarily indicate cause or effect; they simply indicate two things moving together?—*A.* Quite so.

Q. I take it the reason why you have presented these coefficients is that before you know to what extent two things move together, you can hardly investigate the question of causation to which the study of correlation is a preliminary step?—*A.* Quite.

Q. You define a coefficient of correlation as: "A coefficient of correlation, or correlation coefficient, is a number supposed to indicate the degree of interdependence between two sets of quantities or the extent to which one depends upon the other. If this coefficient is unity it implies that one of these quantities depends rigidly upon the other, while if it is zero, there is no connection between them." You do not think that perhaps that might tend to mislead the unfortunately large number of people who are not trained in statistics?—*A.* It was not intended to mislead. Do you mean it proves which way the causation was?

Q. I think that might be so understood?—*A.* It was not my intention, so I shall be careful to disclaim it.

Q. With regard to the question of infant mortality and birth-rate, you have taken fifty-five counties of England and Wales, and you get a correlation of ·84?—*A.* Yes.

Q. Are you acquainted with Dr. Newsholme's "Report on Infant Mortality"? He calculated the coefficient of correlation between these variables for English counties, and he obtained a correlation of ·36?—*A.* Yes, I have not seen that.

Q. There is a considerable difference; have you any suggestion to make?—*A.* No; presumably they were taken for a different purpose.

Q. No. Would you be surprised to learn the explanation depends upon the way in which you calculate the birth-rate?—*A.* Yes.

Q. It is really fundamental to your argument, and makes a considerable difference whether the relation is measured by a coefficient of ·36 or by a coefficient of more than twice as much? Let us follow a little bit farther this point of the birth-rate and the infant mortality. If I understand your argument it is that excessive fertility increases poverty, and that the increase of poverty, naturally, is followed by greater neglect of the children, and so on, and that leads to enhanced infant mortality?—*A.* That may be so put in general terms, but in a country such as this, with about one and a half millions of the adult population with wages of 25*s.* a week or less, it has been clearly established that 25*s.* a week will not cover, even with exceptional precautions, a man and wife and three children. Every child above that, unless it is helped from outside, has to go. Quite apart from any question of neglect, the wherewithal to bring up these children decently is not available.

Q. Well, that is your view, that it is first of all the fertility, then poverty, and then infant mortality?—*A.* That is not the whole of the question, but it is a very large proportion of the question.

Q. That is the sequence of causality that you would regard as probable?—*A.* Yes.

Q. Are you acquainted with any work, for example, such as Heron's—one of Pearson's pupils—in which he measured the degree of poverty by various standards in different metropolitan boroughs, and then, of course, he measured the birth-rate and the rate of infant mortality? If your view is correct, supposing it were possible to keep the measure of poverty constant, there ought to be hardly

any correlation between the birth-rate and the infant mortality rate, ought there?—*A.* There would be some, certainly. There are greater risks. I have not been dealing with it as a physiological phenomenon, but, of course, if births occur too frequently there are other physiological reasons why the children will not be so strong, and so on, and furthermore, you must bear in mind there are a number of phenomena which are very difficult. There is the question of abortion; when births come very, very frequently there are attempts made so often by the women, and infantile mortality often occurs through them. I do not even wish to discuss the question of a lot of these practical questions in that respect, they are so utterly distant from the real facts of life when you come to investigate them.

Q. What I am trying to bring you to is this, that it is a very important matter for us to attempt to isolate the shares of these factors that you have enumerated, and what I am suggesting to you now is that it may be possible there is a connection between mortality and fertility which is quite apart from the economic factor on which you lay the greatest stress?—*A.* Given I do, and I think it is in the same direction, but I also maintain rigidly that the economic factor is at the moment the greatly preponderating one.

Q. There is only just one further point I would like to ask you, and that is with regard to cancer and fertility. You appear to attach some importance, at any rate, to the fact that you find a low correlation, ·15, between the fertility rate and cancer. I take it, using the words "fertility rate" in that case, you mean the births reckoned on married women?—*A.* Yes, quite.

Q. If I may once more refer to Heron's work, you know that he found that there was just the opposite; that there was a large negative correlation between the fertility rate and the cancer rate. I would like to suggest to you that these coefficients have absolutely no relevance in this connection at all?—*A.* I am willing to accept it.

Q. That being the case, do you not think it is a little dangerous, as a matter of scientific investigation, to argue as you do that "the artificial limitation of family has been claimed to predispose to cancer; the correlation calculated between the fertility of married women and the cancer mortality in various countries shows that there is very little connection between them." I suggest to you it shows nothing one way or the other?—*A.* If you wish. The point is I have used these methods, and I have put them

down. I have other evidence showing that the evidence connecting cancer with family limitation is decidedly not made out; on the contrary, it is rather in the other direction.

Q. The point of my asking you these questions is that I understand that you consider that this should be investigated. I am trying to ascertain now from you what statistical method you would propose we should adopt to investigate this question as to the relations, for example, of poverty, fertility and infant mortality. You attach, as I gather now, no importance, or no great importance, to this table of correlation coefficients?—*A.* I do attach importance to that between the crude birth- and death-rates, because I do think that establishes a fairly definite dependence, as I consider it, on the economic question. The reason apparently why the correlation for the fertility and cancer is of little importance is that the number of items taken is very small. I only have the figures for about half-a-dozen countries.

Q. Do you not think that it may also be vitiated by the fact that there may be variations in the age constitution within the fertile period?—*A.* Undoubtedly. I do not attach any importance to them; I do lay stress on the plain connection between the birth-rate and the death-rate as a whole.

Q. I only mention that as an assistant of mine has recalculated Heron's figures, and finds no correlation between fertility and corrected cancer mortality.—*A.* That is what my figures show. The correlation is small and the error is equal to the correlation, so that there is no connection between the one and the other.

Q. You attach importance to the correlation between the birth-rate and the death-rate. You give a correlation for Western Europe from 1841 to 1905.—*A.* Year by year; I have taken from Sundbarg's figures.

Q. Do you seriously suggest that such an association as that has any meaning? Is there not an enormous number of factors which change with time; for example, the expenditure on the Navy has increased from year to year; do you not think you will find that highly correlated with the death-rate?—*A.* It is just possible it might be; I do still maintain it has a meaning in this case, but it is a matter of opinion.

Q. You have an association here, but if you take years in sequence, when many things vary, how can you pass beyond the association to anything which has a meaning

from the point of view of your propaganda?—*A.* I think the more variables I take, the more does it show; the correlation comes out so high.

Q. You take two variables, the birth-rate and the death-rate from 1841 onwards, the one has diminished and the other had increased?—*A.* In Western Europe you will find that the birth-rate rose to the year 1876, the death-rate, on the whole, slightly rose, and from 1876 onwards the birth-rate has declined and the death-rate has declined. There are two variations in opposite senses, and they agree.

Q. They first of all rose together, and then they fell together?—*A.* Exactly.

Q. I suggest that the factor of time gives in itself a third variable. You have got your change in birth-rate as time has changed, and the change in the death-rate with time?—*A.* Yes.

Q. So that it would be possible to determine whether the two rates change together independently of the change of either with time?—*A.* Yes, I have done something of that kind; I did not quite follow what you were driving at; and it brings out the same result. The value of correlation is that if the person who uses this calculates the figures correctly he cannot use his personal bias.

Mr. Grylls. There are a certain number of questions that I wanted to ask, if I might, purely and simply to get information rather than of a more critical order. Perhaps it will suit everybody's convenience if I take the more informational ones first. Would you let us have a copy of that leaflet that you mention in your paper?—*A.* The practical leaflet. I have some of these practical leaflets here, but I have to say one thing about those. That sort of thing has to be done with precautions. It has only been recently issued, and only those can take it who will sign a declaration which says that they are either married or about to be married, and that they consider the artificial limitation of families justifiable. If any of the members here come within that category—that is pre-judging the case—they can have it, otherwise I am afraid I cannot give it. I think you will see the justification we have in taking that position.

Mr. Heape. We should have that as a Commission?—*A.* Our position is that those who want the evidence should at least be able to say whether they approve that such information should be available or not.

Mr. Grylls. It seems to me a most important point. Quite apart from any declaration on the part of the Council you have brought this into the paper, and it is a very

important piece of information that our Committee and other Committees probably will want. I do not know how we can, as a collective Commission, sign a thing of that sort?—*A.* No; but if any member of your Commission would sign——

Q. They probably would be debarred from showing it to anybody else?—*A.* No; there is nothing to prevent that person showing it to anybody he likes.

Chairman. I think it will appear fair to you that we can hardly work along the evidence unless we know what it is that has been one of the outcomes of the operation of your Society.—*A.* The Commission should have all information of that kind; only I do want the Commission to understand we do not believe in the indiscriminate circulation of such knowledge among all people. We say we believe this is a high moral principle, and therefore we go so far as to say that even an adult person should convince himself of the legitimacy of such limitations before he has the information. In some countries, such as France, we deplore that there has been that entire divorce between theory and practice, if I might regard it so, and we do not want that to be the case in this country.

Q. We are not propagating anything; we are here for enquiry; until we get the information we cannot possibly enquire.

Mr. Grylls. I wanted to ask a question concerning the attitude of women towards child-bearing nowadays as compared and contrasted with their attitude in times past. I take it that you would agree that back in the feudal ages, say, the woman was practically the chattel of her husband and she had nothing to say whether she was to become a mother or not?—*A.* That is so.

Q. Now in many quarters the inclination of a man is to consult the inclination of his wife to a much greater extent.—*A.* To a much greater extent among the middle classes, at all events.

Q. Do you think it usual before marriage for people who are about to be married to discuss sex-relationship?—*A.* I am told it is increasingly common.

Q. You suggest marriage should take place at the age of twenty-one?—*A.* About that.

Q. At any rate, that youthful marriages are on the whole rather a good thing?—*A.* Most decidedly.

Q. Have you considered whether people at the age of twenty-one are capable of making a proper selection at that age?—*A.* It is certainly difficult; they can be guided in it.

Q. It is much more difficult than it is at the age of thirty. *A.* I think I should say yes and no to that. You must remember tastes get stronger, more definite at an older age; sometimes more difficult. There is a tendency to assimilation in the case of an early marriage, even if the choice has not been so good. I should personally sum up in favour of early marriage.

Q. Now, may I ask one or two questions slightly more of a critical order perhaps. You begin by speaking of what the central principle of marriage is, "that unrestricted reproduction inevitably leads to pressure upon subsistence, with its consequences." Supposing that every child that was born lived, you would instantly get great pressure on the means of subsistence, would you not?—*A.* Very rapidly, yes.

Q. In other words, if survival of children born was very high, you would get what you speak of?—*A.* Yes, in the absence, of course, of restriction of births.

Q. But if every child normally speaking survived?—*A.* And there had been no restriction, you have got a full birth-rate.

Q. Under normal circumstances, if there was no infantile mortality?—*A.* Yes, and no restriction of births.

Q. Why is it that the principle of Malthus states that unrestricted reproduction inevitably leads to pressure upon subsistence with its consequences? Is it reproduction or unrestricted survival that you mean?—*A.* Death is an evidence of the pressure; there can be no greater survival than the means of subsistence.

Q. Because they die, therefore the pressure has not grown too great?—*A.* The pressure exists all the time, and a certain number are cut off, thereby the amount that are cut off is a measure of the amount of the pressure.

Q. Yes, but it is not the measure of reproduction. Supposing there were a million babies born to-morrow, and they were all drowned?—*A.* Yes, but they do not die by drowning; they die because there is insufficiency.

Q. But it is not reproduction that you mean; it is survival?—*A.* No, I mean reproduction; I mean the ordinary amount of reproduction causes pressure, which pressure is evidenced by death which prevents the pressure getting above a possible limit.

Q. But you mean reproduction combined with a certain amount of survival?—*A.* Combined with a survival of life, which is natural to life.

Q. It is only important because of the next point I

wanted to ask you. You argue that Neo-Malthusians have not aimed at reducing population, but only at reducing unnecessary death, which injures the community?—*A.* Exactly, yes.

Q. I suppose you would agree to the principle of the survival of the fittest?—*A.* In modern civilization, no.

Q. Not at all?—*A.* Well, I do not say not at all; I say it has been modified to such an enormous extent that I am inclined to think that the selection is bad, rather than good.

Q. Do you mean by that, that this is because the conditions are modified and not the people?—*A.* I mean that Malthusianism tends to baulk that; it is a seriously important point that the over-reproduction and the struggle for existence would produce survival of the most fit in the environment, certainly, and if there was no attempt to prevent the death naturally taking place. But when under conditions of humanitarianism you have hospitals and so on to preserve the unfit at the expense of the fit, the survival might be the other way. You may get the survival in the immediate environment, but a serious deterioration of the rest.

Q. The environment has changed the hospitals and skilled medical men?—*A.* I prefer to look upon it in the sense that what you are doing is, you are always fostering the reproduction and the survival of the unfit.

Q. Quite so, but at any rate the conditions under which they live have very materially altered, have they not?—*A.* Oh, yes.

Q. Hence I suppose you would admit that those who survive must alter with the environment? If you admit you have a changing environment, and yet you advocate a low birth-rate, I want to see how you are going to get the necessary material for selection later on?—*A.* Our formula has always been perfectly definite in that respect. Our formula has been, we believe in restriction of births everywhere, but in proportion to the want of success in the environment. Poverty is one evidence of less fitness, for at any rate the present environment, therefore restriction should be in proportion to poverty. Secondly, whenever disease, hereditary disease, is unfitness, voluntary restriction should take place. Again; a person is afflicted with a disease; he has to undergo an operation without which he would inevitably die; he is therefore a variation of the ordinary type which would not have survived except for the artificial help of society; as there is a risk of their progeny having the same defects, it is advisable they should have

the same restriction. There should be voluntary restriction from parenthood wherever there is that absurd selection. That is our definite formula.

Q. That is, the selective limitation of offspring in the proportion to the hereditary unfitness of their parents?—*A.* Yes. If the hereditary unfitness of their parents is indefinite, then the offspring should be zero.

Q. If they are more or less bad, they should have one?—*A.* I think so. If a woman is very anxious to have a child, on the whole, almost as a rule, except in very exceptional circumstances, I am entirely against putting down the law, and saying she should not be permitted to have any at all. I do not mean to say I have no exceptions to the rule, but I should say there are only very few cases where I should be so lenient as that.

Q. You say that you would not limit a seriously diseased parent to no child at all. Now, Dr. Mott, who is a great authority, has stated that in his opinion insanity will die out of itself in somewhere about three generations?—*A.* I am very glad indeed to hear that, because we are always told that insanity is on the increase.

Q. You argue that as a whole the countries of high birth-rate are also the countries of high general and infantile mortality, and that the mortality is lower with lower birth-rates.—*A.* That is evidence, you see, that the unfit ones are eliminated.

Q. You do not agree to the proposition the more you have to choose from? In fact, you would like a restricted number to choose from?—*A.* That is a point on which I am rigid.

Q. The statistics of your League about Australia and New Zealand appear to be extremely valuable from your point of view. It is evidence as far as it goes that you get increased vigour of offspring in accordance with the limitation of birth-rate. Is it possible that in such a country as Australia or New Zealand, where you have at any rate an enormous acreage which is unoccupied, the stringency of selection would not be a little bit smaller?—*A.* The stringency of selection is probably smaller in New Zealand to-day.

Q. Therefore the death-rate would be lower?—*A.* My point is that the death-rate would be lower because they have maintained their birth-rate to their conditions in conformity with it.

Q. I admit that your evidence is very valuable.—*A.* I have always adduced Australia as an illustration of the fact,

because it is the fact that the Australian stock, the original Australian stock, was some of our defectives, and yet under easy conditions with not much selection we have generally one of our most virile races.

Monsignor Brown. Were they physically defective at all?—*A.* I agree they were not defective physically.

Mr. Heape. It is physically you are speaking of here? *A.* I mean in general.

Mr. Grylls. You maintain that it is fairly clearly established that in most Western European countries the marriage rate and age at marriage have comparatively little effect on the birth-rate and that the preponderating factor is the fertility of marriages.—*A.* Yes, I think that seems to be established now.

Q. Then you do not think that the fertility of women who marry late, and who do not exercise their reproductive functions until a later age, is at all affected by that?—*A.* It clearly is affected; I only say it is not the preponderating factor.

Q. I quite admit that it is possible, is it not, if you were to compare the birth-rate in a young woman who has used artificial means of prevention with the birth-rate of an older woman who did not use them, you might find that the birth-rate of both is about the same?—*A.* Yes, I mean to say you would have to have a good many years difference to make a difference; a much smaller difference than would be made by the use of prevention. The difference, too, on marriage of adopting prevention will make more than a difference of ten or twelve years in contracting marriage.

Q. That is your opinion?—*A.* Certainly.

Monsignor Brown. Is it your opinion that there is more frequent prevention among the later marriages than the earlier ones?—*A.* I should think that is probable. Later marriage occurs among the educated classes; it is the educated classes who use the means, so we may take it it is probable.

Mr. Heape. Tell us exactly what you mean by your contention that it is also fairly clearly established that in most Western European countries the marriage rate and age at marriage have comparatively little effect on the birth-rate, and that the preponderating factor is the fertility of marriages?—*A.* The point is this, that the changes in the rates of marriage and the age of marriage have not been very, very large. In most cases, whatever their effects may have been from the physiological point of view, the variations have been so small as not to have much effect.

Dr. Stevenson. What you meant to write was not that the age had no great effect?—*A.* No, but such changes made as have occurred. I think you will find that the changes in the marriage rates are remarkably small compared with such changes as we are discussing here.

Mr. Grylls. You say, I think, somewhere that the number of medical men is increasing who are advising the use of checks. I wanted to ask you whether there is any other reason with medical men as a rule besides actual danger to the wife, or illness of the parent, for which they have advised.—*A.* I know personally of a few cases in which it is done for economic reasons.

Q. By the advice of a medical man?—*A.* One or two medical men have told me that they have seen very poor people absolutely suffering under the conditions; they see the woman is emaciated or the conditions are such that she is not likely to have the children satisfactorily.

Q. What attempt have you made to show the effect on the health of women of the use of preventives of various kinds?—*A.* We have no evidence such as could be put in; but of course we have plenty of general knowledge that prevention has been employed for years, and that no ill results have followed.

Q. No ill results have followed?—*A.* Most decidedly; many, many cases of that kind.

Sir John Macdonell. I put it to you if the result of the adoption of your policy is to raise wages in the manner that you indicate, will there not be a strong and an increasing temptation still further to reduce the output of children?—*A.* You mean and finally get real depopulation; that the population would decrease?

Q. Depopulation.—*A.* An actual reduction in number. You must bear in mind that this restriction is almost universal in the educated classes to-day, but they are very glad to have the children.

Q. Would there not be a strong temptation to pursue a policy which would produce depopulation?—*A.* I think they want children.

Q. That is what I thought you would say. Now, why do we want children?—*A.* If I put it on the narrowest grounds —shall I say of self-interest?—it is something pleasing for us to think of in our later life, we are to have some one who comes after us we are interested in; it is as natural almost as we wish to marry. It is not a natural human phenomenon for us to want to eliminate ourselves.

Q. On this side of the account there are great practical

advantages to be got by diminishing the birth-rate, on this side of the account are certain other disadvantages, partly those that you have indicated now; might there not come a time in which by acting on your policy you would seriously injure those other interests, moral and other?—*A.* I can conceive no reason for it. Where the family restriction is very general, the love of children is notably high. In France it is the case. In New Zealand, where the knowledge of means of restriction has been extremely general for years, you will notice when they get down to the death-rate of 10 per 1000 they arrested the decline of the birth-rate; in fact, there has been a slight rise.

Q. In your view, this diminution of the birth-rate might lead to an enhancement of affection?—*A.* Most decidedly; in fact, I believe the only way of securing my position is, and I believe it is shared by others, that the birth-right of every child is first to be wanted, and we shall only have the children we do want, and we shall be quite careful to have as many as the race wants.

Q. Your policy, if strictly adopted, would be diminution of birth-rate by the poor, increase of birth-rate by the rich?—*A.* I think so, yes. For example, I am no believer in marriage without children, except for special reasons; I am no believer in single-child families, though I have only one myself; but I want to point out that in the middle and richer classes children will be more esteemed when the human race escapes from the idea that children ought to come irrespective of volition. Now, as this idea extends the whole idea of childhood will get into greater estimation—we see it coming—and then the middle and upper classes will take to having more.

Q. Your arguments in the main, do they not apply to those persons with incomes of say under 30*s.* a week or 40*s.* a week?—*A.* There is where I feel the need is greatest.

Q. Have they any application at all, or scarcely any, to those with incomes over that?—*A.* Yes, in certain cases. For example, many with much larger incomes than that, whose conditions are such—mainly professional people—that their lives demand their training, their lives demand a higher standard.

Q. That would be a very fair retort, and I must except those, but dealing with those persons who are in easy pecuniary circumstances, has your policy any bearing upon them at all?—*A.* The type of an artisan who may earn rather higher wages; you mean that?

Q. Say an artisan earning £3 or £4 a week?—*A.* Well, there

I should say yes, to a certain extent. I do not believe that more than four children are advisable in those cases, to give the children the best opportunities, the mother's best attention.

Q. It would have no bearing at all upon his employment, whose income was not £3 a week, but perhaps £50, £60, or £100 a week?—*A.* There again, in the case of the very wealthy people, it has to be decided by other circumstances; it becomes just as I say, purely a eugenic question.

Q. Eliminating that, dealing only with the policy of your Society, and eliminating the question of quality, it is a doctrine applicable, roughly speaking, to those under £3 a week?—*A.* That is where we are trying to get it applied; our difficulty has been that it has been adopted by people that we do not want to teach it to, and they have satisfactorily avoided the difficulty, and it has not been adopted by people that we do want to teach it to, in order to make a completion of the selection.

The witness withdrew.

Meeting.—October 31, 1913.

Chairman.—The Right Rev. Bishop Boyd Carpenter, K.C.V.O.

Witness examined.—Dr. C. V. Drysdale.

(Examination continued.)

Mr. Heape. Do we understand the feelings you express in your précis regarding the advisability of reducing the birth-rate are based extensively on economic grounds?—*A.* Oh, no, on every ground. I know of no particular social reason to the contrary, at any rate, and on most strong social questions which come up I advocate it.

Q. I understand you have attempted to consolidate these views by means of evidence based on physiological grounds.—*A.* I think physiological arguments come in the same direction.

Q. Are we to understand that if it were found that the physiological grounds on which you have based your opinions are not substantiated, you would still retain your opinions for other reasons?—*A.* Then it becomes a balance. If one

finds that other social grounds strongly point in one direction, and physiological grounds point in another, then we come to a dilemma and we must find the best method.

Q. If you find the physiological facts are opposed to your opinions, would you still retain your opinions for other reasons? I will put it in another way, and ask you if the physiological evidence adduced is really of importance for the substantiation of your views?—*A.* It is not of importance. So long as the physiological evidence is not very strongly and powerfully against it, then I should say it would not alter my opinion.

Q. By very strong, I mean physiological facts; they are not really of importance to substantiate your views?—*A.* No, I should say not; that is to say, there are strong views on social and economic grounds; therefore it becomes a question are there any serious objections from a physiological point of view; there never was any need necessarily of physiological evidence in favour. All we want to know is, is there any strong physiological evidence to the contrary? and then it is a question whether the physiological evils are sufficient to outweigh the others.

Q. You bring forward certain physiological opinions?—*A.* Yes.

Q. Do you claim that you have sufficient facts to warrant the opinions?—*A.* I take it the Commission knows I am not a medical man, although I am in contact; my family is medical, and the position with respect to that is I have collected certain information together, but I think it must be patent to every one that the views of the medical profession are very strongly biased on this question, and therefore just as I would not say that the evidence I have got before me is absolutely certain, similarly I cannot accept the views to the contrary as being conclusive until they are very strongly proved. Merely statements to the contrary are not sufficient.

Q. As a rule, then, all your physiological statements are merely opinions which you have gathered from reading? You do not advance them as solid facts which you are prepared to substantiate?—*A.* I do not adduce anything in my evidence from beginning to end as being conclusively proved. Every atom of this matter is very strongly controversial. They are given in good faith as the best opinions I have been able to get and nothing more.

Mr. Hobson. I will refer first to what you said last time on the subject of intensive agriculture, and other improvements in methods of producing a food supply. Am

I right in understanding that your view is that intensive and scientific agriculture can only mitigate the operation of the law of diminishing returns and does not abrogate it; that is to say, that a free growth of population would necessarily involve a growing proportion of the productive energy of society being devoted to food-getting, diminishing the proportion of productive activity which would be available for what we will call the higher activities and for leisure?—*A.* That does not quite express my position. My personal opinion is that the production of food as a whole in the world at the present time is not so much a question of labour, but in any case there is always plenty of labour for that purpose; and I think the great restraining influence upon the production of food at present is the fertility of the soil, and the power of fertilizing it. I do not care whether there are diminishing returns or not. My position is that I do not believe that the additional fertility of the soil which can be obtained from year to year is sufficient to cope with the additional amount of life which will be brought into the world if no restraint is placed upon it.

Q. You carry that to the extent of saying that the further reduction in the birth-rate and in the rate of the growth of population in such a country as this is therefore desirable?—*A.* I consider that a diminution in the birth-rate is decidedly desirable, not necessarily in the rate of growth of population, because whatever the rate of growth of population we have at present, that means to say we have been able to sustain that rate of growth. It is only that at the same time we have unnecessary death. I have no objection to the rate of growth going up as long as it is not accompanied by unnecessary deaths.

Q. That is to say, in a new growing community you would have no objection to any growth of the population, even assuming that all that growth was absorbed in producing food?—*A.* I have no objection to that as long as it does not produce death; as long as it does not push the death-rate above whatever the normal value would be if the people were healthy and sufficiently well fed.

Q. In a sparsely populated country you admit it will be more readily feasible or desirable?—*A.* It may be; not necessarily at all.

Q. Then what would you say to a country which, although thickly populated, is growing in income faster than the growth of population, and which being in free commercial intercourse with other countries is able to procure increasing supplies of food?—*A.* That point, of course, is an

important one; you speak of wealth growing faster than population.

Q. I said purchasing power of food growing faster than population.—*A.* Yes.

Q. But the point is this: how does the purchasing power exercise itself?—*A.* The purchasing power is distributed at the present time. It is of course different in different people, and at the bottom of society the purchasing power is small; of course that is recognized. Now, the point I wish to make is this, that if that were divided among the community, that purchasing power will be very different as a matter of fact. If enough is not produced for all, then the remuneration or the amount of wealth possessed by those at the bottom of the scale must be less than that required to obtain the full needs of life; whatever economical rearrangements you may make you will always have that substratum.

Q. You argue that increase of population is an effect and not a cause of progress?—*A.* Quite.

Q. Do you admit that our actual food supply from all sources in this country has been growing up far faster than our population as a whole, with a special application to the wheat supply of this country?—*A.* I think perhaps slowly so. I am not concerned with respect to the wheat.

Q. But you would be surprised if told that that increase is calculated as doubling between 1870 and 1909—that is to say, it is alleged, I cannot give you this at first evidence, it is taken from Porter's *State of the Nations* (the revised edition)—which shows, if the figures are true, that the wheat consumption per head has doubled for the population as a whole, just doubled or nearly doubled between 1870 and 1909?—*A.* I should think that is very likely true. That does not affect my point as regards the total amount of nutriment. It might be a mere question of custom as to what kind of nutriment is used.

Q. Early in your evidence you say that the population difficulty is the principal cause of the labour unrest. I think in your little book you relate it directly to the rise of prices? —*A.* Yes.

Q. Now, real wages appear to have risen, and prices to have fallen between 1873 and 1895, and since that time prices, as we know, have risen and real wages have probably slightly fallen; what comment would you make upon that? —*A.* Well, my comment upon that is this: There are two parts, are there not, involved, the period between 1870 or whatever it may be, and 1895, and from 1896 to the present day. The earlier part of that period was not so very long

after the Repeal of the Corn Laws, and the cessation of certain wars which made the whole question of transit of food very much easier than before, and we then had a period of rapidly increasing supplies of food from abroad. In my opinion, that was the reason for an actual rise of wages combined with a fall in prices. Now, it has been fairly abundantly shown recently that the population of the United States, which used to be a very great contributor of food to this country, has risen so rapidly that within the last few years its exports have almost ceased; and you will find, I think, if you take the facts altogether, that that has a particularly close relation to the change which we are speaking of. I consider that the reason of that change is that from about that time till now the difficulty of getting food from abroad, the cause of the increase of population in countries other than our own, has become greater.

Q. That is to say, the proportion of the population of the world which is going on to areas of high food consumption, including the wheat supply, has grown faster than the actual growth of the capacity of the wheat-growing countries as a whole. Is that your position?—*A.* Yes.

Q. And that, therefore, restriction of the birth-rate has not gone far enough to counteract that influence?—*A.* Quite.

Q. You say, too, that restriction of families is the only practicable means of improving their lot?—*A.* Yes.

Q. You would say that the power of combination of labour, for example, and of legislation, and the two combined would have no power independently of the factor you state of improving the lot of the working classes?—*A.* I do not deprecate necessarily any changes of the kind you mention, but I point out that, during the last ten or fifteen years, a fall in real wages, both these factors that you have been speaking of have been in operation, that is to say, there has been strong combination, very strong effort on the part of the working-classes, probably greater than at any time in history, to improve conditions. All questions of legislative reform, in my opinion, operate very slowly, therefore for the poorer classes at the present time the only immediate practical thing to improve their condition is to adopt limitation.

Q. Do you think there has been an increase in the volume of unemployment in recent times?—*A.* No, but what has been done would have increased the employment if other factors had not come in, and there had not been further legislation.

Q. You do not represent that anything which one may

call provisional over-population is a cause of increase of unemployment, for instance, in view of the fact that in nominally good times virtually all the employable labour of a country like this, with a necessary margin for fluctuation from trade to trade, is employed?—*A.* I think what unemployment there is must be ascribed to over-population, but I do not dogmatize on that point.

Q. You mean, if there could be got what is called a scarcity of labour, that that would tighten up the employment?—*A.* Certainly, and when we see seasonal unemployment, I do believe it is very largely due to the lack of food production in other countries which is unable to feed our labourers, and thereby really they are not employed.

Q. Turning to another point; an individual working family is evidently better off by limiting the size of its family, but supposing that a whole class of workers similarly acted, is it certain that their ability to maintain their current standard of comfort upon a smaller wage might not lead, under the pressure of conditions, to a reduction in wages?—*A.* On the contrary, I hold the other view entirely, that the limitation, combined with the advantages which that would give them in being better fed, in being better clothed, in being able to train their children better, would very soon result before many years in a very great improvement in the status of that industry.

Q. I ask you that partly because it is often said that women working in the same sort of work as men, or in the same degree of skill, are paid at a much lower rate partly because they have a smaller family dependent upon them?—*A.* Quite; and that is undoubtedly the case where you have a considerable amount of competition, and at the same time there is no combination at all.

Q. Would it not be the same case with regard to unskilled men in most trades who are not organized effectually?—*A.* The question of organization does affect the matter, and therefore, if in addition to whatever efforts the working-classes are making at the present time in general, the general restriction of births takes place, then there will be an improvement all the way round.

Q. I am right, I suppose, in holding that your main position on this subject of wages is that the workers would make a double gain; first of all by the increased economical efficiency of persons brought up in a small family, the larger food supply, the better care and the better education, that would increase their economical efficiency, and, other things

being equal, would enable them to earn a higher wage?—*A.* Yes.

Q. And also, in addition to that, that there would be the effect of the scarcity of labour in the labour market?—*A.* Later on.

Q. And anything which is scarce, other things being equal, if it is necessary, tends to get a higher price paid for it?—*A.* Precisely.

Q. So wages would tend to rise from that cause?—*A.* Precisely.

Q. Of course there might be, perhaps you would admit, a contradiction between those two desires; that is to say, supposing increased economic efficiency, suppose owing to the better food supply and better care, and so on, a person became a harder worker and a more productive worker, that would be so far an increase in the total supply of labour, and would rather go against the other argument based upon scarcity?—*A.* I think not, because that would only conduce to a greater average all-round production, and therefore, as the individual concerned would get his share, it seems to me that the community gains more from the efficiency of each individual man, and there are fewer of them; then it appears to me the share of each must be higher in the community.

Q. I was not contravening your idea about the utility of the process; I was trying to argue whether, supposing, as the result of better food supply and better upbringing, each worker became worth a worker and a half; that would not in itself be an equivalent to an increase in the supply of labour that might be off-set by other considerations?—*A.* It is an increase in the supply of labour, but the result of it is not to be divided among more people.

Q. The wage will be higher in proportion to the increased productivity, but not in proportion to any other element of scarcity which would be cancelled?—*A.* But if you make one man equivalent to two, certainly you have the same quantity of labour as before, but the wage result from that production goes to one man, instead of being divided between the two; therefore the result per head is better.

Q. If you had a smaller number of labourers coming into the labour market, and they became more efficient, but they shortened the working day, all you would get upon your theory would be a strong pull upon the national dividend?—*A.* Certainly.

Q. A larger proportion of the national dividend would go in wages, in other words?—*A.* Quite.

Q. It will be argued, of course, by some economists, that this would reduce the rate of interest and of profits; that the higher wages would be taken from interest and profits. Now capital, of course, as we know, is becoming more and more fluid, and at the present time in a given year half of that new capital which is created out of the current savings flows overseas. Might there not be a tendency, if one nation adopted this method at a more rapid rate than the rest of the world, for that flow of capital overseas to be so far stimulated that there would be a damaging reaction upon the national dividend, and upon the amount of wages?—*A.* That is a reason for making the movement which I have mentioned international instead of national. It is the fact that in most nations the birth-rate is falling as fast or faster than in this country, and while that is the case there is no reason for checking the process.

Q. The point I was trying to put was this, whether you admitted it would not be quite safe for a single nation to follow the restrictive policy faster than other nations?—*A.* If one single country were to adopt that process, it might be unsafe. I think perhaps the advantages gained in its strength of capability in other directions might outweigh certain disadvantages, but it is clear certain disadvantages might accrue just as they may be dangerous.

Q. As an economic policy of reform it is not a national, but a world policy in its logic?—*A.* Quite, but it seems to me, I think, the country that does adopt it gains a certain amount of the advantage. My position is that even if one country does adopt this, it gains, but some of the gain is taken away to others. By being purely national it does not lose the whole of the gain, but it may lose part of it. By making it international, it keeps the whole of the gain.

Q. I wanted to ask you whether history does not say that most wars and invasions are due to the pressure of densely peopled areas upon areas which are thinly peopled in their relation to their available food supplies?—*A.* Quite. In fact, we adopt the principle that the pressure of the population is the cause of war, and that the reduction of numbers is the only way to secure peace.

Q. On the question of the yellow peril, might not a further reduction of the white nett increase of the world further stimulate Asiatics to overflow into such white countries as were open to their migration, and also to cause grave conflicts with countries which denied them access?—*A.* If you will look at vital statistics evidence shows that as the birth-rate of Europe as a whole falls, instead of producing any

reduction in the rate of increase, it is positively producing an increase. The reductions in the birth-rate actually, if anything, increases the rate of increase of the population, and at the same time gives you stronger and healthier survivors.

Q. But it must continue to increase the aggregate population if the birth-rate were reduced still lower; does that follow?—*A.* If the League which I represent saw any signs of the process being checked, the death-rate going up if the birth-rate fell, we should be the very first to preach against our own doctrines.

Dr. Saleeby. How does that apply in the case of France? Has the death-rate in France been coming down *pari passu* with the falling birth-rate in France?—*A.* The position in France is a very interesting one. If you take the whole time since the fall of the birth-rate set in—you must remember in France it set in immediately after the Revolution—if you take the whole period as given by the statistics that are available—I do not know what reliance can be placed on the earlier statistics—it appears that the fall of the birth-rate in France since the Revolution to the present day and the fall of the death-rate have been equal. It is most astonishing, a fall in the birth-rate to eighteen, and the fall in the death-rate by almost the same amount. When one comes to consider the matter in detail you will find that just at the time of the Revolution, a few years before it, the increase of the French population was only 2 per 1000 per year; to-day it is very slightly less than that.

Q. There was, in 1912, a considerable decline.—*A.* I do not remember last year, but if you take a five or ten year period there has been a substantial increase.

Q. Is that the case in the last five-year period?—*A.* A substantial increase; something more than 100,000 in the last five years.

Mr. Hobson. Early in your evidence you say that the results of restriction up to the present have been anti-eugenic, and in the same paragraph you couple the poor and the unfit. I wanted to ask you whether you regard wealth as an index of fitness, and poverty of unfitness?—*A.* To some extent, yes. There are two questions in that; there is wealth, which is made by a person himself, and riches, which are inherited. If you consider a person who is rich by his own exertions, that is evidence, at any rate, of what you would call economic fitness in a particular environment. If they prove successful in the present environment, however unsatisfactory we may consider that

environment, it shows capacity, it shows capability of acquirement.

Q. And you are clear in your mind, although the propaganda of your Society, for instance, has been very largely directed to the working-classes, that the actual adoption of restriction has been far greater in the non-working classes? —*A.* The position is unfortunately that our doctrine has not been addressed to the working-classes. There have been too many obstacles to our doing it on anything like a large scale.

Q. Then you do not attribute the very considerable reduction in the rate of growth in the population to your propaganda, or to the knowledge of restrictions?—*A.* I think you mean, of course, we do not attribute the fall in the birth-rate to our propaganda. I think so, because we wished ourselves to direct our propaganda to the poorest classes. All we could do was continually to direct all our movement to convincing the educated classes of the necessity of so extending it; but they allowed it to stop at themselves, and did not let it go any further.

Q. That is to say, the educated and well-to-do classes who could afford to have families have, shall I say mainly for selfish reasons, restricted their population?—*A.* I do not admit mainly for selfish reasons. I think it would have been far better had they realized that the restriction should have been conveyed to the quarters where it was most needed.

Q. But they would not have anything like the same reasonable motives for restricting their families as the working-classes?—*A.* Not such serious motives.

Q. Do you not think that the actual restriction has taken place as much among the intelligent artisan class as it has among the professional class?—*A.* During the last ten years it has penetrated down, grade by grade.

Q. Will there not always be, or may not there always be, a large body of shiftless and reckless folk who will reproduce themselves freely; that is to say, will the spread of the knowledge of methods of restriction stop what you regard as dysgenic selection, or will it only reduce it? *A.* There are two answers to that. In the first place, it is obvious that the present position is an untenable one. We know that the want of restriction among the poorest grade is enormously due to ignorance. It is clear, therefore, that if such knowledge is available to them it will, at any rate, conduce to more restriction in those quarters than at present.

Q. The most intelligent and far-sighted among those

people who now do not restrict will then restrict, and the least intelligent and the least far-sighted among them will continue to reproduce themselves at a more rapid pace.—*A.* That is the whole point. The question which we yet have to find out is, how far when this knowledge is general it will be used wisely, apart from the position we hold on *a priori* grounds that it will be adopted very generally. Next, one has always to remember in marriage there are two persons, and one of them generally has a certain amount of prudence. But apart from that we have the question of Holland, where the opportunities have been given, and where there has been an opportunity given for the teaching, if you like, of the most reckless, there is every reason to state that the selection has not been dysgenic; on the contrary, the figures for the Army and so on show very clearly that there seems to have been a very great advance in the physique of the nation. The point I should say in that case is this, that when we do find that there is complete liberty given to any one, there is a residue who will not restrict. Then it comes to us to consider how best we can induce those to do so. We have studied this point very strongly, and for that reason we do say most definitely that it is of the greatest importance that this instruction should be given by the hospitals where the poorest and the least fit naturally congregate.

Q. Supposing there were secured, either by combination among the working-classes, or by a process of public policy, what one may call the decent minimum standard of life for a reasonably large working family, with an adequate security against unemployment and other emergencies, what would be in your opinion the effect upon the quantity and the quality of population?—*A.* In the first place, I should say that at present I deny the possibility of any legislation or any combination producing that effect.

Dr. Savill. How can you get over the fact that two independent investigations by school medical officers, one in Scotland and one in England, found respectively that the sixth and seventh were the healthiest children? Of course you say there are the statistics to be got among the very poor.—*A.* In the first place, I am afraid I should even dispute that evidence. There is so much evidence on the other side against anything like such late-born children being the better ones.

Q. There is evidence to be had.—*A.* There is evidence to the contrary.

Monsignor Brown. What would you call large; over

six?—*A.* In the present state of this country, I do not personally advocate a family of more than four.

Lady Willoughby de Broke. Do you consider that we should only consider the welfare of this country, and is it not important from a national and imperial point of view that we should consider the conditions of our dependencies, such as South Africa and Australia, and other sparsely populated countries? If we do not populate them, other countries will. Surely this is undesirable from our own point of view, and also because history, I think, will show we are perhaps the best colonizers?—*A.* I can assure the Commission that this League is not deficient in any of the questions of patriotism. When it comes to a question of colonizing, who has to do it? It used to be generally the poorest. If we have a surplus, naturally those are the ones who want to leave, and you know perfectly well that the colonies are getting rather tired of that sort of thing; they do not want that; they want, if anything, our best. We probably should get more colonizing and more efficient colonizers, if we had a smaller birth-rate. It is perfectly clear that those who die are not of any avail for colonizing or improving our Empire.

Dr. Scharlieb. Why should you conclude that the falling birth-rate has everything to do with the falling death-rate to the exclusion of our sanitary measures, to the exclusion of all the trouble that has been taken all these years to promote the health of the people and the wisdom of the people?—*A.* So rigidly do I conclude it that I do not believe sanitation or medicine or any of these great advances have as yet, though they will in the future, saved a life at all.

Dr. Saleeby. What causes are at work, in your opinion, to discourage marriage? This is not my question; I have been asked to ask it.—*A.* I believe that one of the great causes is the fear of the economic disability of large families; prudential motives. I believe that is the principal cause.

Q. I have been asked to ask you whether you can estimate or give us any estimate at all of the number of restricted or unrestricted families, as to the proportions in your League?—*A.* In our League, I take it that practically every one who is in a position to do so who joins our League does restrict her family.

Q. You are acquainted with Mr. Webb's inquiry among the members of the Fabian Society?—*A.* The figures have been given in my booklet entitled, *The Small Family System.* It shows that in the Fabian Society in about 90 per cent. of the more recent marriages they have voluntarily restricted.

Q. How far do you think preventive measures are known? —*A.* Among the poorer classes they certainly are very largely unknown. I should imagine among the educated classes a very large number of them know; they know some, not necessarily all.

Q. When and where do they get their knowledge of the use of preventive devices?—*A.* Largely, I take it, from communications from mouth to mouth. To some extent from the medical profession.

Q. Have you any knowledge of the extent to which abortion is practised? One would hope and suppose it was less?—*A.* The very object of our doctrine is to get rid of abortion. We consider that we have very considerable evidence for the statement that this is one of the only possibilities of getting rid of abortion.

Q. What evidence can you afford us?—*A.* The Registrar-General's returns show that deaths from miscarriage are decidedly on the decrease. They have declined very rapidly lately. Of course, that may be interpreted as meaning that the treatment is better or that the frequency of cases is less; I cannot say, but it is the fact, I believe, that the deaths from abortion as shown in the Reports are rapidly on the decline. I hope the Commission will get the information on that point.

Q. You have not among your own members any statistical information?—*A.* No; none whatever.

Q. As regards this leaflet, No. 219, that was only the 219th issued?—*A.* Quite. That is the number issued in about a month.

Monsignor Brown. I think you said a moment ago you thought a knowledge of restrictive methods passed round from mouth to mouth, which of course is my own experience. It does not pass necessarily by literature; women tell each other; young men tell each other; fathers tell each other; do you not think this knowledge which you are putting out, in a very specific and formal way will get passed from mouth to mouth?—*A.* Yes. Women come and say they are very anxious and will communicate it to all the people.

Q. And even in spite of the pledge for what it is worth that they will not go to them who are not to be married or are under twenty-one years of age, you have not any strong hope or belief that it will not go to younger people?—*A.* No; we can only pledge the people as far as we can in the leaflet itself. When it comes to be discussed you will see we have given very strong injunctions to the people as to this object.

Q. Would you agree that one of the great restraints against early unmarried unchastity is the possibility of illegitimate birth following?—*A.* I am not very clear on that point. Among certain classes certainly. No doubt among the working-classes, sometimes in the North of England, I believe it is not so.

Q. If they get round by easy and restrictive methods, it is going to make for a very great deal of early unchastity?—*A.* It is a question how far the greater encouragement to marriage given by this knowledge may balance, or even do more than balance the risk of the unmarried getting the information.

Q. You do not think marriage is put off, granting that marriage generally means one or two children, even on the restrictive basis among the more educated classes, almost entirely for financial and employment reasons?—*A.* It is put off until there is some security, rather I think until the husband has made a position.

Q. I am talking about where the woman is employed; particularly where the woman has an educated employment, say the immense number of the elementary and secondary school teachers, an immense body now in the country, and to whom child-bearing is a distinct disability. It means three months' absence, to say nothing of various other losses, troubles and so on?—*A.* Quite.

Q. Very well, you think they will marry young still and practise this?—*A.* I think that it will be an enormous advantage. You have given an illustration. There are many cases at the present time where a young fellow is not earning enough to support a wife, and yet he may find a young girl who is also earning her own living. One of the great advantages we say in this recommendation is that they should be able to marry if necessary, and that therefore the young woman will not be required to give up her employment. They get married. They can wait until the husband's position is sufficiently ample to support a wife and child before she need give up her employment and start mothering.

Q. Take a married woman who is not to give up her employment; do you think you are going, by having an early marriage, to induce her to have children at any time? If it is a sort of sanctioned system that any amount of young couples can get married, and they will live together two or three years, and have no children, that general custom removes any reproach on the part of the woman of being considered incapable of child-bearing; do you think you

will even get your family of three or four?—*A.* This knowledge has been extremely prevalent in New Zealand for many years, and I think the fact is that the birth-rate is fully maintained, and has risen somewhat.

Dr. Greenwood. I desire to ask a question in regard to a reply you gave me last time. I think I understood you to say you attach considerable importance to the correlation between the birth-rate and the death-rate?—*A.* To the correspondence between the birth-rate and the death-rate.

Q. It has been suggested to-day that your correlation depends upon the birth-rate falling as the death-rate has fallen; you very properly pointed out or suggested that that would not explain the death-rate rising when the birth-rate rises?—*A.* Quite.

Q. Do I understand you to maintain definitely that as being a statement of fact?—*A.* That the death-rate does rise when the birth-rate rises?

Q. Yes?—*A.* I have a good many illustrations of that.

Q. Then I should like to ask you about the state of affairs in this country. If you correlate the birth-rate and the death-rate from 1838 to 1912 by the method used by you for Western European countries, you get a correlation of ·84, which is about what you get for Western Europe in general?—*A.* Quite.

Q. Now, if you split that into two periods, and you make the correlation from 1838 to 1876, the period when the birth-rate was fluctuating, the correlation is minus ·12, and if you take the period from 1876 up to date, it is plus ·92; in other words, the whole of the positive correlation is due, is it not, to the falling of the death-rate as the birth-rate has fallen during the last thirty years?—*A.* I have not worked it out, but I am quite willing to accept your figures.

Q. Assuming that is correct, I should like to ask you how you justify that statement you have made to us?—*A.* Well, the justification is on the ground that it is not taken for a single country; there are so many alterations. I have taken the correlation for a number of different countries, between different countries at the same period, the same country at different periods, and there are many alterations. If you take the statement which is lying before you there you will find an illustration such as that at Berlin, where the rise of the birth-rate has been accompanied by an enormously sharp rise in the death-rate. The two have gone up together and down together in an almost exactly corresponding manner. You are quite right that one country taken alone does not prove the case.

Q. Have you ever divided any country at all into the periods up to what you say was the exciting cause, the Knowlton Trial, and the period beyond, and have you measured the correlation between the birth-rate and the death-rate for the two periods separately?—*A.* I have not done that. That is very interesting, but I do not think it is so extremely relevant as would appear. Our point is, the Knowlton Trial only means that there was an alteration in the birth-rate; the method of securing it does not come into the correlation at all.

Q. We are to understand that you have not in fact applied this method to the two periods?—*A.* No.

Q. Then I suggest to you that you have not established by a statistical method any general correspondence between the birth-rate and the death-rate, apart from the fall in both which has been observed in the last thirty years; do you accept that?—*A.* No; I cannot accept it. It is perfectly true I have not the evidence in that form, but I am perfectly certain if it comes to be done in that way, the correlation in many cases will come in the period before and afterwards. The evidence has not yet been obtained, but when it is, I am quite sure it will show what I have indicated.

Q. I am asking whether you maintain that you have, in the evidence which you have submitted to this Commission, established such correspondence?—*A.* I think I have by other evidence. This is one link of a chain, the verifications of the population doctrine. The population doctrine, as a first principle, led to this. When I come to investigate this, both by ocular investigation and by such correlations as I have taken, it agrees. There is a very definite reason from the popular point of view, and there is a good theoretical basis for assuming that law to start with, and when one finds such verifications as one has put on, it does agree then. I do for myself maintain absolutely that that law is so.

Q. You are not suggesting that there are good reasons why this law should be proved to be true, if you started to do so. What I am asking is whether you still maintain you have, in fact, proved any correspondence except between a fall and a fall?—*A.* Yes, I certainly do; because the correlation being so high in other cases where a birth-rate has gone up as well, shows that it could not have been as high as it is if at any part of the period it was a negative one.

Q. I understand you to say you have not tried in any other case?—*A.* I have not split it up into periods, but what I have done in some cases is to say that the correlation is so high that if any portion of it had been negative it would

have made the coefficient much lower than it is. When you get a rapidly rising and a rapidly falling birth-rate, and the correlation taken over the whole period is something like ·92, it is a moral certainty it could not have been negative over any part of the period. If you take Berlin, that is the case.

Q. I did not quite follow your point?—*A.* My point is, that in Berlin there was a very rapid rise of the birth-rate and a very rapid rise of the death-rate, neglecting such influences as the Franco-German War, and one or two epidemics which were obviously cataclysmic; if you neglect those two or three causes like that you will find the correspondence on the up-grade and the down-grade is extremely close.

Q. And you have calculated, as I understand, the correlation for the whole period?—*A.* Yes.

Q. But you have not calculated the correlation for the period up to 1876?—*A.* No; I have not.

Q. Clearly that is very irregular, allowing for the cataclysmic year?—*A.* Yes.

Q. So it comes to this, that you surmise—I am not suggesting you may not be perfectly correct—that if you take the correlation for that period up to 1876, you will find it significantly positive?—*A.* Yes.

Mr. Hobhouse. On another point, you advocate the restriction of births partly from the point of view of improving the position of the working-men by creating a relative scarcity of labour?—*A.* Yes.

Q. But you also said, I gathered on another point, that the restriction of births has so beneficial an effect upon the death-rate that it does not mean a restriction of the population?—*A.* Yes, quite.

Q. There is an actual increase, or at any rate a constancy of population for a considerable indefinite period after putting in practice the restriction of the birth-rate; so the population is not decreasing?—*A.* Quite.

Q. Then there is not an actual scarcity of labour?—*A.* The position as regards that is how does this act. It means that of course we are increasing the duration of life. If the death-rate is going down we are increasing the duration of life.

Q. There are as many in the labour market as there were before?—*A.* Yes; it is possible that there are. That is a question of those who come to the age at which labour starts. I think there are rather fewer that come to that age; I think there are rather fewer entering the labour market.

Q. I do not know that I can make these two points consistent, because afterwards you were saying the population would increase.—*A.* Yes; it will increase because there are more older people.

Q. You are contemplating a diminution in the number of children; you are contending for a diminution of adult males and yet you are to have an increased population as a whole. That suggests that the number of those over threescore and ten will be very large indeed.—*A.* It is getting larger. We hope there will be a larger proportion of those who will live the full term of life.

Q. It would require a good deal of proof, I suggest, the two positions. The fall of birth-rate would restrict the supply of labour, and on the other hand did not tend to diminish the population, are two points it is very difficult to be consistent upon.—*A.* I think they are consistent. That is one of the things which affects it very largely; there is a scarcity of boy labour.

Q. We are speaking of the whole population.—*A.* It has really had the effect of very largely increasing the scarcity of boy labour that has been going up, and apart from whether it is rational or not that the rate of increase of population has been very little checked in this country; it has been slightly, but not at all greatly.

Monsignor Brown. Has not boy labour been very largely checked by legislation?—*A.* No doubt there are fewer middle-class boys; they are at a premium; their wages are going up enormously.

Mr. Hobhouse. In your view the ordinary rate of wages would depend, not, of course, upon the supply of labour only, but on the ratio of the demand to the supply?—*A.* Quite; it always does.

Q. The opportunities there were for engaging in labour?—*A.* Yes.

Q. Supposing the restriction of the birth-rate were equal among all classes of the population, say that the total part of the labouring population is constant, its ratio of the whole population is constant, do you think there would necessarily be any advantage to the working-men in a total diminution of the numbers?—*A.* Yes, I do.

Q. On the ground that he would have a better pull upon the distribution of wealth?—*A.* Yes, certainly. My point is, I always bring everything back to the food supply. A much smaller population can produce practically as much food as a large one because it is not a question of land and labour mainly; it is a question of fertilizing material. If,

therefore, the smaller population can produce as much food, the necessities of life increase per head.

Q. The total output represents the total demand for labour?—*A.* I do not admit that at all. I should admit it, were there no question of the restricted fertility of the soil.

Q. The question of the fertility of the soil; it would depend on a ratio between the amount of demand that there is in the aggregate for the food of the world and the amount of energy, science and skill which the world would put into getting that food out of the land.—*A.* No, to me it is what the land is capable of producing, what nitrates and phosphates and potassium salts there are in the land.

Q. Is not that a thing which depends upon the study of science?—*A.* Not so much as might be thought; in my opinion it does increase practically in the arithmetical ratio, so I hold the arithmetical ratio of Malthus. I did not a few months ago; now I do.

The witness withdrew.

Meeting.—November 7, 1913.

Chairman.—The Right Rev. Bishop Boyd Carpenter, K.C.V.O.

Witness examined.—Dr. C. V. Drysdale.

(Supplementary Examination.)

The Secretary. After Dr. Drysdale circulated his little leaflet, some members of the Commission wanted to ask him supplementary questions upon it; Dr. Drysdale was going out of town, but on receiving my urgent letter he most kindly put off going.

Monsignor Brown. Would you think that a great many married people know nothing of the methods, or very little of the methods that are set out in your leaflet?—*A.* Among the poor, very few of them know of any contraceptive method whatever.

Q. What would you base that opinion on?—*A.* More particularly on our recent experience since we have adopted an open-air propaganda. We find people coming up to us and imploring us for information to such an extent that

we have issued this leaflet. We did not start this propaganda till this year, and then we found, as we expected, the knowledge of it was extremely small.

Q. That is among the very poor working-classes ?—*A.* The ordinary working-classes.

Dr. Fremantle. But especially among women ?—*A.* But also among men.

Dr. Greenwood. Have you any data in regard to the physiological, psychological effects of these different devices ? Have you received any communication ? You see, they are quite different from a physiological point of view.—*A.* Of course there is a considerable literature concerning the subject. You will find it in the writers on sex subjects, such as Powell, and Ivan Bloch, and others, but I may say the evidence is very conflicting.

Q. I was wondering if you had accumulated any facts ? You are familiar with people's theories, but you have no special facts ?—*A.* Not special to ourselves ; not more than could be obtained by the Commission from other sources.

Dr. Schofield. I have to see a large number of nerve sufferers, and the question is how far their sufferings are due to the use of certain of these methods, and if so, which method produces the worst nerve results, and I think there is a common consensus, however wrong ; it may be a mere assumption, that there is a connection between the after troubles both of a man and of a woman, and certain preventives that may be used ?—*A.* May I, on that point, mention one thing which I think is of very great importance, the question of what I may call suggestion in this matter. You know perfectly well that, even at the present time, among the middle classes, although they have adopted these things very largely, there still is an idea, which has been made very prevalent, that there is something wrong about it, they are warned of certain dangers. If you were to tell a person who adopted a perfectly healthy diet that the food he had was poisoned, do you not think it might upset his digestion and produce the effects of poison ?

Q. I agree with all that.—*A.* I would personally say that there is no reliable evidence at the moment.

Chairman. I am sure I express on behalf of the Commission, our thanks to you for the kind way in which you have given us evidence.—*A.* Thank you very much ; it has given me very great pleasure to do anything I can.

The witness withdrew.

Meeting.—November 14, 1913.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Sir Francis Champneys, Bart., M.D.

Mr. Grylls. Can you give us an idea of the proportion of your patients who are structurally incapable of fertility?—*A.* There is a very small number anatomically incapacitated.

Q. And what is the chief source of that incapacity?—*A.* I do not know; congenital malformations are exceedingly rare.

Q. Are the patients of whom you speak entirely composed of members of the upper classes?—*A.* I speak mainly of the upper classes, but of course I have had a large hospital experience among the poorer classes.

Q. Can you differentiate between the classes as to the relative fertility of women in the upper and lower classes?—*A.* No.

Q. Do you find women who assume that the reason why they are sterile is because they do not experience sexual desire?—*A.* There are instances where sexual frigidity and sterility run together, but there are also cases of the opposite. I think there is an association between sexual frigidity and sterility. Whenever I have a case of sterility, with no structural cause, I have the husband examined as well, and I find that in a fair proportion of cases it is he that is sterile, and frequently from the effects of previous venereal disease.

Q. Do you associate the use of certain contraceptive methods over a lengthened period with reduced power of fertility?—*A.* I have an impression that it does.

Q. Do you consider soluble pessaries harmful?—*A.* I believe the common ingredient is quinine, and I do not believe that does any physical harm whatever.

The Dean of St. Paul's. You said some cases pointed to diminished fertility in some instances where contraceptive measures have been used and then suspended; do you mean cases in which the birth of children has occurred before their use and suspended after?—*A.* I do not think I could tell you.

Mr. Grylls. Could you tell us what age you consider the safest for parturition?—*A.* Between twenty-one and

twenty-five is the best time for a woman to bear her first child.

Q. We have been told that medical men are increasingly disposed to advise the use of contraceptive methods. Is it your opinion that this advice is given for other reasons than the danger to health of the woman likely to be produced by child-bearing?—*A.* Well, it may be matter of opinion; I know of no statistics on the subject. I should say, generally speaking, there is an increasing fashion in that direction lately.

Q. Concerning the proportion of patients who are incapable of fertility other than from actual structural malformations; is that a large number?—*A.* Yes. Apart from the husband's infertility. There are a good many women do not have children from some cause one does not understand.

Q. You cannot give us any proportion?—*A.* I am afraid I cannot. The thing has never been unravelled.

Q. Is there anything that you could tell us with regard to the amount of illegal operations that are performed? —*A.* Well, I cannot tell you very much about them. I am afraid they rather fight shy of me. I am not the person to ask.

Sir Bryan Donkin. You do occasionally see cases which have come to you; women suffering from having been many times mishandled?—*A.* Oh, yes; occasionally.

Mr. Grylls. Is there much induced permanent sterility from that cause?—*A.* It is one of the causes, because inflammation is so likely to follow it, especially in unskilled hands.

Q. Regarding menstruation; is it your opinion that scanty menstruation or excessive menstruation, or irregular menstruation affect fertility?—*A.* The health of the uterus, of course, is one of the conditions that is favourable to fertility, and the reverse. The proper discharge of that function is, of course, more or less a guarantee of a clean bill of health.

Q. In your opinion, does fear of pain at parturition or distaste of pregnancy prevent women from bearing children, and so use contraceptive methods? We have had the position impressed upon us very strongly that it has been entirely an economic factor?—*A.* Yes; I think it is mainly an economic factor, if you use that in a large sense, that is to say, many people prefer to spend their money otherwise, but I think there is also a very strong economic factor in the sense that if people have limited incomes they wish to bring up their children at least as well as they have been

brought up themselves, and they will not have large families if they cannot do their duty by them. That is, I think, very largely the reason why families are limited.

Q. You do not think there is very much use of contraceptive methods simply because of the distaste and the fear on the part of women?—*A.* No.

Dr. Fremantle. I wanted to clear up one of your answers. We were talking about the action of contraceptive methods producing subsequent sterility, and you said, I think, that you had no reason to believe that the constant use of soluble pessaries had any such effect?—*A.* Pessaries are usually made of quinine, I believe; I do not know, but I believe the common thing to use is quinine, and I do not believe quinine has any deleterious effect so far as the effect of quinine is concerned. When you talk about the deleterious effect of the prevention of pregnancy, you have to eliminate carefully from this first of all the deleterious effect of childlessness. That is the first thing, and then other things too. But as regards the direct effect of quinine pessaries, I have never seen a case in which I thought any damage had been done.

Q. May I go farther and say, you limit yourself in that answer to pessaries made of quinine. There are other substances presumably used in pessaries?—*A.* I do not know.

Monsignor Brown. Do you mean another drug?

Dr. Fremantle. Yes. You cannot give any answer with regard to other materials in pessaries?—*A.* I have no direct experience of that. I have seen occasionally injury done by other methods.

Q. As regards the other methods by which you say you have seen harm done occasionally, what methods are you referring to—mechanical methods?—*A.* Well, I think injections sometimes have penetrated the Fallopian tubes.

Q. Injection with a mild antiseptic?—*A.* Yes.

Q. It may penetrate the Fallopian tubes and cause inflammation?—*A.* Yes.

Q. And seal the Fallopian tubes?—*A.* It might. On the other hand you have to remember that that is liable to happen sometimes when an injection is given under any circumstances.

Q. And yet it happens comparatively rarely, you would say?—*A.* Yes.

Q. You would not like to put any figure, the percentage?—*A.* No, I have seen a few cases, only a few.

Q. In using preventive methods, what is their effect on

health as apart from sterility?—*A.* I think they have a double effect. Any prevention of pregnancy is liable, first of all, to give the woman the disabilities of childlessness, which is one thing. In the second place, a woman who is in the habit of preventing pregnancy is often in a state of apprehension lest it should occur; she is apt to be, but that is only rarely so, I think. I think in the great majority of cases no such effect is produced, and I do not think it is true to say that in the majority of cases prevention does affect health directly in a deleterious manner.

Sir James Crichton-Browne. Not the nervous system? —*A.* Occasionally; but seldom except in the two ways that I have mentioned. If you mean absolute prevention and not allowing a woman to have any children at all, it does produce a deleterious effect upon her; but if you mean to say that she has four children instead of eight, I have never seen any effect produced in that way myself. I am not going into the moral question now at all, I am dealing purely with the physical question, and I have never seen any physical harm done by moderating the number of children, directly, taking it as a whole. There are methods, of course, which, as I say, do sometimes produce deleterious physical effects directly.

Dr. Fremantle. At the present time the life of a woman is a great deal fuller and more responsible than it was fifty years ago. Is that constant occupation of her mind and will and interest of one kind or another likely to be having an effect quite apart from physical causes and make her less likely to conceive?—*A.* No, I have never seen anything to make me think so.

Dr. Scharlieb. In the forty years you have been in practice would you say that there were more cases of ovarian disease, or less?—*A.* I have no statistics; it seems very common.

Q. Have you any impression as to any change in the extent of failure to be able to nurse? What proportion of the mothers among your patients would you say cannot nurse their children?—*A.* I should think perhaps about 15 per cent., something of that sort. It is no good my putting down figures, because I really have not worked the thing out.

Q. Have you any idea of the comparative distribution of them between the two classes of your patients?—*A.* It is more difficult in the upper classes, because so many of them do not want to be bothered with it; they generally put it on their husbands.

Q. Has there been any increase in your practice of forty years of amenorrhœa?—*A.* You mean primary amenorrhœa?

Q. First of all primary amenorrhœa?—*A.* Lasting for how long? It is quite a common thing for a neurotic girl to start life like that.

Q. Do you correlate scanty menstrual flow with infertility?—*A.* Oh, as long as it lasts. If it is really deficient it is a sign of imperfect activity of the pelvic organs and is sometimes associated with sterility.

Q. Have you any impression, after an experience of forty years, as to the extent of conceptions that do not come to viable term?—*A.* There is always a large number of them. It is like the apples on a tree which set and do not mature.

Q. You would recommend the registration of still-births?—*A.* Yes.

Q. Have you any personal experience of the action of lead, diachylon, knowingly or unknowingly as destroying the life of the ovum?—*A.* I have no personal experience, but I know about it. I know in some districts diachylon has been used as an abortive agent.

Sir James Crichton-Browne. The profession is unanimous on that subject; the sale of diachylon ought to be stopped?—*A.* Oh, yes.

Dr. Saleeby. In your judgment, would it be a fitting thing for this Commission to recommend that that step should be taken?—*A.* I do not see why it should not.

Sir James Crichton-Browne. It is used very largely in the districts round Newcastle. It began in Sheffield, and I believe Sir Thomas Oliver thinks that in the counties of Northumberland and Durham it is very prevalent?—*A.* It cannot be used for a legitimate purpose. It is spread on cloth to make a plaster, and it can be sold in that way.

Witness. If these are all the questions, I should like just to say this one thing: I am not at all sure that if things were made a little easier for the upper-middle classes, you would not have a considerably increased birth-rate. I mean to say, as a matter of fact, the thing which is very hard upon the upper-middle classes is the expenses of education, and if you allowed a man to write off in his income-tax paper the expenses of education, as he does his life insurance, it is possible you would have a good many more babies than you have. It is very hard on them. The working-man now has already, for every child he brings into the world, a certain allowance made. It does not matter in the least whether that child goes straight from the lying-in chamber into the churchyard; he gets it all the same. If

anything of the sort is wanted to be done, the man ought to be rewarded who keeps his children alive for eight years, say, or something of that sort.

CHAIRMAN. We are very much obliged to you.

The Witness withdrew.

Meeting.—November 21, 1913.

Chairman.—The Right Rev. BISHOP BOYD CARPENTER, K.C.V.O.

Witness examined.—DR. DAVID STARR JORDAN, President of the Leland Stanford Junior University, California, and Chairman of the Eugenic section of the American Eugenic Association.

DR. SALEEBY. You stand for the known and semi-official head of Eugenics in America?—*A.* I stood as the visible head of Eugenics in America for a considerable while.

Q. What I wondered was whether you would be able to direct the Commission to any existing knowledge in America as to some of the points that specially concern us?—*A.* There is no doubt that the University-trained girl marries later in life on the average than the others, and she is more particular as to whom she marries, but it is not true that she takes less care of her children, because on the whole she is very much wiser than the other woman. I think that the use of preventives and of preventive times in one way or another is a factor, and a large factor, in the fall of the birth-rate, and that is partly due to the fact that so many women have so many things to occupy their minds that the bearing of too many children becomes very exhausting.

Q. My personal difficulty is to know, judging by the existing American evidence, where to go and what things specially to follow when one is faced with the differing opinions. Dr. Haviland's opinion at the Eugenics Congress was extremely positive in the assertion that there was absolutely no statistical or other evidence of any fall in the natural fertility?—*A.* I do not think there is a particle of evidence of such a fall.

Q. In other words the whole of the fall is due to volition?—*A.* Well; it is social in one way or another.

The Chairman. As regards rich and poor?—*A.* Yes. It is true that you have families like these farmers in New England or the middle West that had a great many children; their children marry into comparatively higher wealth; they have automobiles, they have social surroundings; there are many things to occupy them, and there is a tendency for them to desire fewer children, and that is carried somewhat to an extreme. I think that Dr. Martha Carey Thomas—the President of the Women's College at Bryn Mawr, Pennsylvania—has a good many statistics altogether.

Dr. Saleeby. Capacity to bear?—*A.* Capacity to bear is undoubtedly reduced by having a great many intellectual strains and other kinds of experiences of one kind and another that make it virtually unwise to go on indefinitely bearing children. It threatens health. Where a woman has nothing but her own household it is possible for her to bear a good many more children and bring them up than she can when she has to receive people and to do a variety of other things.

Q. That is sociological rather than physiological?—*A.* It is not physiological at all except in so far as there is a greater strain in many of the things that women have to do. For instance, to be the wife of a high official or to be the wife even of a University Professor, the things women are called upon to do make it sometimes so that the strain would be absolutely greater, and preventive measures are adopted, mainly caution, although undoubtedly a variety of other measures are adopted.

Dr. Scharlieb. It is not that she cannot bear the children, but she feels it is unwise; she has not the opportunity, she has not the time?—*A.* I know a woman who has eight sisters. She was educated at the University and married a man prominently engaged in executive work. She bore two children; then she travelled and was taken ill with fever in the Tropics, which left a certain deficiency of circulation. She bore another child, and the physician told her at the age of thirty-seven she must not bear any more because it would be dangerous. The last one she was unable to nurse, although she had nursed the others without difficulty. She is typical of a great many women that are trained in the broad relations. You know, our people of executive relations are mostly people descended from the farmers. Coming into the cities, and assuming larger relations to life, and travelling far and wide as they do,

there are many things that make child-bearing a greater strain than it used to be. I know that particular case which I refer to and I believe the physician was absolutely right in saying she must not bear any more.

MR. HEAPE. Would there be any opportunity of getting actual facts regarding these questions? I gather this is your opinion, but are there any methods of getting facts?—*A.* I can only give opinions, because on this birth-rate question I have not myself made any statistical studies at all and much that has been written has been written with less information than I have.

DR. SALEEBY. In the Paper of Dr. Hedger, of Chicago, which was read at the Infant Mortality Conference, 1913, London, her conclusions agree with those of Stanley Hall in his book on adolescence?—*A.* Yes.

Q. They both represent American experience and they both there positively assert that the sum total of modern conditions on the supposed to be better type of American woman is making her physiologically incapable of motherhood?—*A.* "Physiologically" is too strong a word. I have not much confidence in Dr. Stanley Hall's conclusions in this regard; he does not think women ought to be trained too much. In a general way, the girls who go to our Universities are physically stronger than other girls.

Q. Muscular strength?—*A.* Physically stronger and perhaps physiologically stronger. They have better health. But it is true that Society does put upon a woman of the so-called better class tremendous strains. She may dance all night, attend late dinners, make fatiguing outings with all kinds of mental worry, which is a greater strain than any intellectual strain. It is hard to say what is physiologically possible, because I do not think we have any evidence that physiological limits have been reached, except in individual cases of neurasthenia and similar deficiency.

Q. The only kind of evidence is this of Dr. Hedger, where she takes a very large number of girls and studies their type of menstruation, and finds that it becomes, as she considers, gravely irregular or gravely abnormal, and suggests the influence of their college education has destroyed their reproductive facility?—*A.* I do not believe that; it is possible that a certain kind of education might have that effect, but it is not the intellectual work that is a strain on the girl at all; it is the outside things. The girl that goes to a University using the gymnasium and has the care of a good woman physician, comes out of the University in better health than the average girl at home. But still, I have

known girls in the University, with some important piece of work to do, to put their feet in cold water and work half the night. Things of that sort may cause grave disturbances, but that is through unwise behaviour, not education.

Q. Is there a use of lead in America as an abortive agent?—*A.* I have never heard of it. Statements are made that drugs producing abortion are common among the higher class, but I think these probably exaggerated. It is certain that a very large number of people do count the days in the month; a great many spill the seed, speaking plainly.

Q. Do you know at all what the teaching of the medical profession in America is; is it entirely hostile, or what?—*A.* When child-bearing endangers a woman's life or health, most physicians say it is better she should not bear children. I do not think that was the teaching of the medical profession thirty or forty years ago.

Q. But there is not any appreciable section of the medical profession in America now that would deliberately give advice on this subject?—*A.* If they do, I do not hear of it.

Q. Nothing corresponding to any propaganda?—*A.* No.

Monsignor Brown. Would you say that the Churches sanction the use of these appliances?—*A.* The Church would not; the Church might sanction the precautions I mentioned, but would not sanction the use of any mechanical appliance. The Church, I think, might be said to be absolutely unanimous on that point, and I think the trustworthy part of the medical profession also.

Dr. Saleeby. Is there a physiological, biological, decline in the birth-rate, apart from volition?—*A.* I have no faith in that at all.

Mr. Heape. Then you mean to say it is purely environmental change?—*A.* Yes. "Like the seed is the harvest." Conditions may change and habits change with them. If the more energetic emigrate or are killed, less energetic men become fathers and breed their kind.

Q. But have you any evidence for that?—*A.* Well; only the evidence of one who has observed our people for a great many years. A child nowadays is just as vigorous, just as energetic physically as there is any evidence that its actual ancestors were. In athletic matters there has been a steady upward grade, and in health matters a steady upward grade among University students. That action is environmental; we know better how to handle young men and women than our fathers did. We also save more weak ones.

Q. That is environmental; you can do that, but to say they are exactly the same seems to be an impossible proposition?—*A.* There is fluctuation up and down, here and there, and a reversed selection through war, industrialism, emigration and immigration, but taking the thing as a whole, I do not think anything of decline of one generation from the status of its actual ancestors.

Dr. Saleeby. There is a good deal of evidence in regard to the lower animals, with improper diets at certain times, collected by Dr. Chalmers Watson of Edinburgh, and some experiments have been made by Dr. Houssay of the Sorbonne, in Paris, showing that habitual over-feeding with meat sterilized the races in question. Have they troubled themselves in America to keep any data on that point?—*A.* No; I do not know any one.

Q. You have no evidence that over-nutrition sterilizes?—*A.* No; of course, I have certain prejudices against eating as much meat as most people do. Such sterilization as may come from food would be due to reduced vitality.

Q. Dr. Tollington refers to this subject; he uses the term meat poisoning, and he is referring to a good deal of the modern evidence of physiology on the lower animals experiment?—*A.* One experiment was carried on at Stanford University by Professor James R. Slonaker upon rats—it was not what was expected, and it may be inconclusive—feeding rats on vegetables only, on maize, and the like, and then feeding other rats on meat partly, each group having a run and the distance measured. The meat-eating rats ran over about half more territory than the other.

Q. Dr. Chalmers Watson of Edinburgh made some very careful experiments which seemed to show microscopically that the ovaries of the rats which he studied were degenerate when they were fed exclusively upon meat as compared with those which were fed upon porridge?—*A.* Dr. Slonaker's experiments were inconclusive only as to muscular activity.

Q. I want to know the influence on the next generation on the reproductive glands?—*A.* It is only lately the effects of foods and poisons on the reproductive glands have been seriously studied.

Mr. Heape. Recent researches in connection with this matter have shown that, by feeding, you can entirely prevent growth and reproduction—a special kind of food?—*A.* There is no reason why certain lines of food should not affect these organs. It seems reasonable that it should be so, but as to the facts I do not know much. For one, Dr. Stockard

of Cornell University seems to have shown that alcohol acts as a poison on the germ cells. Others have reached similar conclusions.

Dr. Saleeby. You have not gone so far as to make any human dietetic experiments?—*A.* No; we have not.

Q. Have you got any registration of still-births in America?—*A.* The different cities have; yes.

Q. Have they had it in operation for some considerable time?—*A.* The city Indianapolis, I am informed, has had records for a long time, and part of this record was with reference to the inherited pauperism of the city. Out of about 150,000 people they had about 4,000 that had inherited pauperism, absolute paupers; their ancestors were paupers as far back as they had traced them. Some of them were paupers, prisoners of debt, shipped over from England to Jamestown, Virginia, in the seventeenth century. Among those people, pauper by inheritance, there is a large number of still-born children; the majority of those in the city were of that type.

Dr. Newsholme. You were mentioning the lower birth-rate among American-born women; do I gather that you think it is sufficiently accounted for by the fact of other interests having been aroused, and without the use of preventive measures in most instances, or were you only speaking of a limited class of that kind?—*A.* Of people in America of English origin, I know a great many. In this class women are in excess. They marry later and they marry more carefully than they used to do. A great many that would be naturally marriageable have failed to marry, the men going westward and leaving them behind. The number of marriages in proportion is not so great among those people at home as it is when they go out into the Western States. I think, however, that as regards numbers of children, the greater freedom in the wife's status at home is the largest factor.

Q. May I interrupt you for a moment? I happen to have worked out a number of figures for Providence, Rhode Island, another part of the United States, in which all those factors were eliminated, those are the arithmetical factors, and the result came out that assuming a given proportion of the people married, assuming that those married people were of the same age, then you get the correct birth-rate in Providence, in some part of the registration States of America, which is not much higher, if at all higher than that of Paris. Those are the actual facts of fertility among these towns in the United States. Do you think that that

great decline which is indicated is merely a question of social considerations, still more that preventive measures have been adopted?—*A.* I think there that it is not a question of any change in the physical nature of the women, nor in their reproductive ability. Social factors have changed, and some weakly girls marry, when under the rougher conditions they would have died in childhood.

Q. I agree entirely with that so far as I am able to judge, but still the point remains, without any change in the woman's constitution, the lowered birth-rate might be due to the women having wider interests, greater freedom from sex solicitation, the men being more considerate, without the use of any direct preventive measures?—*A.* Yes.

Q. Do I gather from you that you were thinking that such influences as these account for the whole thing, or is there not also a very wide use of preventive measures?—*A.* There is probably no doubt that those things split somewhat on matters of conscience, that people who are conscientious in the affairs of life would avoid those preventive measures that seem to them immoral. Whether they judge them correctly or not I do not know. I do not think a mechanical appliance would come into the moral family.

Q. Do you include in mechanical appliances the use of alum, for instance?—*A.* I should say that would come according to how the person who recommended it had spoken about it. It might be recommended in such a way—I know it has been in one case—that it seemed a very proper thing. I think it an injurious drug in any case.

Q. Do I understand that you leave it an open question as to the relative proportion which is born between the moral means of continence and what may be called the dubious means?—*A.* The higher the type of women and men, the less likelihood there is of dubious means being resorted to. There is a type of society woman who affects cigarettes and cocktails followed by veronal and like drugs, in ordinary affairs of life. These women would doubtless use any preventive brought to their notice.

Mr. Heape. Is it, or is it not possible that there is a decline in active sexuality amongst these people that you are speaking of, and that instead of relying upon strong repression of feeling or upon preventives, Nature, owing to environment, is working by reducing sexual activity amongst these women and men who live the life you describe?—*A.* There is no question, I think, that a variety of other interests tends to reduce sexual activity. Doubtless these drugs

reduce normal desire though they may be temporary excitants.

Q. As to the considerateness and continency of the husband, have you reason to think that that is more commonly exemplified among the well-to-do than among the mass of the population?—*A.* Among the intelligent it is.

Q. Is it confined to a class?—*A.* If a man becomes well-to-do through his own exertions, I would say, yes, but a man who inherits money is liable to be the most inconsiderate of people.

Q. Then you think, in America, that when the knowledge of these preventive measures, as Dr. Saleeby put it, has soaked down to the lower strata of Society you will have a similar reduction of birth-rate there?—*A.* Well; that is a question of opinion. I do not believe that this is a leading factor in America.

Dr. Saleeby. Dr. Hoffmann's conclusion was they had got the knowledge?—*A.* I think that is only a minor factor relatively. Of course, the knowledge is pretty widely diffused that conception does not take place at some periods.

Q. The first generation very fertile, and the second generation right the way down to the native American?—*A.* I do not think the use of artificial restrictions is the leading factor with us; it may be.

Dr. Newsholme. It was suggested to you just now, unless I misunderstood, that the physiological family consists of sixteen children. May I suggest to you that five or six is nearer the normal family when no preventive measures whatever have been undertaken, and a normal life has been led.

Monsignor Brown. And youthful marriage.

Dr. Newsholme. And a fairly youthful marriage; have you any facts bearing on that point?—*A.* I may say that is about true.

Monsignor Brown. That is to say, suppose a couple marry at twenty-one and survive to forty-five, and take no precautions whatever; make no effort whatever to restrict families, it will work out about four or five?—*A.* No; it will work out more.

Q. Is the birth-rate lower in your cities than in your rural districts?—*A.* It is lower in the cities; yes.

The Witness withdrew.

Meeting.—December 10, 1913.

Chairman.—The Right Rev. Bishop Boyd Carpenter, K.C.V.O.

Witness examined.—John Brownlee, M.D., D.Sc., Statistician to the Medical Research Committee under the Insurance Act.

Dr. Greenwood. I think, if I understand your position correctly, you doubt whether the decline in the birth-rate in modern times, in Scotland especially, can be attributed mainly to a conscious limitation, and you remark that, " the whole distribution of the birth-rate figures seems to disprove that any but natural causes are at work in the production of the change." Perhaps you would not mind explaining a little more fully to the Commission the inferences that you actually draw from the figures you rely upon, and why?—*A.* In the first place, I would like to remark I think the problem is exceedingly complex, and I do not offer the remarks I make to-day as a full solution of it. I think there is probably a good deal of prevention and a good many other factors tending to lower the birth-rate, but I think, on the other hand, there is a long rhythm in life that is expressed in different ways, and when I began to look into the figures in Scotland I thought I would take them out in all the different districts which are pretty homogeneous, and I did one thing, I only made one change, that where one of the large cities, Edinburgh, Glasgow or Aberdeen, comes in, I excluded that from the figures, and you find that over the north of Scotland the birth-rate has gone down. This is a corrected birth-rate, allowing for the fertility of each age of each number of married women living at the census. I find that in the northern part of Scotland you get a 10 to 12 per cent. decrease of the birth-rate, and in the southern part of Scotland you get about 17 to 18. You get Scotland roughly divided into two parts in which the birth-rate has decreased differently. Now, some of these are purely agricultural districts, Roxburgh, Dumfries, Kirkcudbright and Wigtown, that is the southern, that is practically purely agricultural, and the northern district, Orkney, Shetland, Caithness and Sutherland is just a mixture of fishing and agriculture. There are no populations, there is no town of any importance in the whole of these districts, and you find there a very marked fall in the corrected birth-rates. The

district which is the most residential, namely the West Midland, is the one where there has been least fall. Of course, that is largely a mining district too; there are a good many mines in that district. Then when you come to the districts round Glasgow, I give the way the birth-rate in Scotland has fallen since 1881. The suburban parishes just circle Glasgow in a ring, and some of them, such as New Kilpatrick and Kirkintilloch, contain very, very large residential populations. Then comes along a largely residential population, Cathcart; here you have the biggest fall in the birth-rate. In the rest it is sometimes less, and sometimes slightly more than that of Scotland as a whole, so that there is very little evidence of conditions in the residential suburbs of Glasgow of a fall beyond what has taken place over the whole country. But in Cathcart there is. I would have liked very much to have given the different districts in Glasgow, but the census authorities do not publish the figures for the different districts in Glasgow, and if I could have done that I could have probably shown districts in Glasgow that were like Cathcart. We will have some figures from this census, but we have had none from any of the previous censuses.

Q. Roughly summarizing it, it amounts to this, that with regard to the distribution of the fall of the birth-rate through Scotland, were it mainly a matter of prevention one would expect to find the fall sharpest in the residential and mercantile districts, and roughly in the districts where the level of culture and so forth was highest, but, in point of fact it is equally marked in purely agricultural districts; and in purely residential districts there is only one, namely Cathcart, in which the fall is very much more marked than in the whole of Scotland?—*A.* These are not all purely residential districts, some of them, Cambuslang and Bothwell, have a considerable mining population.

Q. Have you any reason to suppose that Cathcart, which gives the biggest fall, is more purely residential than, say, Bothwell?—*A.* Oh, yes; Cathcart is a more purely residential district than Bothwell. The parishes which are nearly purely residential are Kirkintilloch, New Kilpatrick, Eastwood, and Cathcart. The other three are mixed districts.

Monsignor Brown. But do you mean better-class population?—*A.* Yes; with regard to five districts mentioned the three others contain a large working population.

Dr. Greenwood. So that at any rate there is evidence in your opinion of a purely residential district, in one case

at any rate a residential district, where there has been no fall?—*A.* Yes.

Q. This evidence so far satisfied you first of all that there is some evidence of prevention. You have some evidence, have you not, that in Cathcart, apart from these figures, prevention has played a part?—*A.* Yes; I think there is no doubt about that. I asked one of the doctors, who had been in practice then for forty years, just shortly before he died—he died the other day—what his opinion about prevention was, and he said undoubtedly there was a great deal of prevention going on in this district, but that he saw now many more people who had no children, or who had only one child, who really wanted children, than he used to see when he first started practice. Of course, that is an impression, but that is just as he gave it.

Q. Having got this starting-point, namely that there appears to be a greater fall, so far as you can judge from the statistics, than can be explained by pure volition, you were led to consider some other possible hypothesis, and you came upon the conception that this might be an instance of some periodic phenomenon. Now, before asking you to enlarge on that idea, I should like to ask whether the figures which we possess for birth-rate in this country, or in any other country, whether the series as it stands—it is only eighty years—exhibits any form of curve which your statistical knowledge would lead you to suppose suggested any periodicity?—*A.* The form of the curve suggests the end of a condition. I do not think, however, that anything could be based upon the mere form of the part of the curve at our disposal. At present we know too little about these things.

Q. Assuming for the moment that it is a question of periodicity, you think that the amplitude is so great that we have not got a complete wave, or do you attribute that to material faults in the figures themselves?—*A.* The earlier figures for the number of births are said not to be complete, but even if they were I do not think the data sufficient to try to estimate a period. Supposing there is a period I would say it is a period of about 200 years or over. I do not think, therefore, it would be possible to say what would happen very far outside the range of the figures. It is what is mathematically called "extra-polation"; it is not a sound mathematical process.

Q. Does that remark apply also to the case of Sweden?—*A.* As far as I see, the rise in the birth-rate began at a time before the Swedish statistics give any information. I went

over these statistics, and they did not show anything definite; they are compatible with the existence of a long period, but that is all. That is why I did not refer to them. The only other figures that I was able to get are those relating to Geneva. I do not think these are figures on which too much can be based. A fall of the birth-rate took place in Geneva between 1700 and 1800. Of course there were wars, and it is impossible to say, without having more than one census of the population of the town showing the number of married people at the different ages, how far the fall is a real fall.

Q. Then, in your opinion, so far as actual statistics are concerned, we have not, it is indeed inconceivable that we could have, from the past a sufficiently long series of figures to test by any statistical process any periodic law, so that one must fall back upon some other kind of evidence?—*A.* I think so.

Q. Still keeping to the pure facts; is there any suggestion that you would make to the Commission regarding following up this point, as to how far the fall of birth-rate is due to prevention? Is there any kind of inquiry that you would suggest might be made?—*A.* I think personally that if some kind of inquiry were made from the older medical men in the different districts in Scotland referred to, *i. e.* those in which there is a marked fall in the birth-rate and also in those in which the fall is much more slight, you might get a certain amount of evidence as to whether there was much prevention. The doctors I have spoken to do not seem to think that before 1901, in these country districts in Scotland with which I am personally acquainted there was very much prevention. If an inquiry were made, say over one county, from the older practitioners, you might get perhaps some information which would cause that view to be markedly modified.

Q. You think, then, that the only possible lines of getting either confirmation or disproof of your suggestion would be really by an inquiry among the older practitioners in the rural districts of the country?—*A.* Yes, I think so; of course, not necessarily Scotland; regions of England.

Q. So that, summarizing the suggestions that you give as to actual further inquiry on this point, they resolve themselves into the question of asking the doctors in some rural districts, and secondly, into extending your statistical comparisons to the English rural districts?—*A.* Yes, I think that is what it amounts to.

Q. Those being the starting-point, you were led to form the hypothesis that this was a periodic phenomenon. Per-

haps you would not mind putting before the Commission some of the facts within your knowledge, regarding, for example, the periodicity of zymotic disease, which seemed to you to suggest a periodicity?—*A.* First of all, fever has been my speciality and the starting-point of the argument arises from the work which I and others before me have done on the periodicity of fever outbreaks. Take, for instance, a disease like scarlet fever. As far as statistics go, there is a marked regularity in the outbreaks: every five or six years you get an outbreak of scarlet fever. Now it is found that this happens with almost all of the infectious diseases. In diseases like small-pox, there are long periodic waves apparently with large outbreaks every now and again. In measles there is also evidently a long kind of swinging period.[1] Plague, for instance, was absent for many years, and so much absent, that when Ziemsen published his *Encyclopædia of Medicine* in 1874, the article "A Plague," begins by stating that as plague is an extinct disease, there is not much use saying anything about it, but as it is historically so important an account will be given. You know how much plague we have had again in recent years.

Dr. Saleeby. You mean extinct in Europe?—*A.* Yes.

Q. Not in China?—*A.* Not in China, no; he meant practically an extinct disease.

Q. In Europe?—*A.* In Europe it was extinct. Practically in India at that time too. You know that for some reason or another that it has again become widespread; that there are great outbursts of it in many places. To return to scarlet fever, it is well-known that Sydenham, who practised in the end of the seventeenth century, considered scarlet fever an exceedingly mild disease. In the middle of the last century, scarlet fever was considered, however, the most deadly disease of children. Although there is no evidence at present that scarlet fever itself has much gone down in amount, it is again of low fatality, some quality of the organism has varied so that it now causes a milder disease, just as it did 200 years ago. There are so few statistics about scarlet fever that you cannot follow it completely. One of the difficulties is that even though we have mild scarlet fever at the present moment, we occasionally get very severe outbreaks. In the history of medicine it is an outbreak of a severe rather than a mild type of a disease that tends to be recorded. Sydenham, however, described it as a mild disease, and anybody writing

[1] In the last century in London from seventeen to twenty-two years.

about it at the present time would also describe it as a mild disease. It was in studying the periodicity of febrile diseases that I was led to examine whether the laws which govern the lowest organisms might not also apply more or less to higher forms. Among the data I began to investigate were those of population, to see if there was any evidence of variation in the rates of increase of population in historical times.

Dr. Greenwood. Then that practically amounts to this: that, as one finds in so many forms of life a periodicity, either perhaps in their infectivity or possibly in their power of vitality, that by analogy one might suppose that similar variations occur in man, and you have presented here the evidence which seems to suggest such a periodicity. I think I am right in saying, am I not, that variations in the prosperity of the nation has been generally accepted by everybody, and the point that is novel is the way in which you attempt to correlate the variations in population?—*A.* Yes; I think that is the novel point. The point about variations in the periods of the birth of great men is as old as Aristotle. I cannot find the reference, but a friend wrote and told me that he had seen it stated that Aristotle had said it was a law of Nature that great men came in groups.

Q. Taking it with regard to the history of our own country, you refer to the population of England in the thirteenth and fourteenth, and beginning of the fifteenth century; would you explain the basis of your calculations of the population in the fourteenth century?—*A.* The Poll Tax is the only really absolute figure you have. The other figures of any importance as far as I could see are those that bear upon the amount of ground under cultivation. From these, I thought it could be put at least that the population of England was as great in 1400 as in 1300. There were very severe famines in 1300, and there was the great plague from 1347–48 onwards. Supposing the population remained stationary, it must have been a population that was really increasing had it not met such adverse conditions.

Q. It is a fact, is it not, that these calculations regarding, for example, the population in 1377, are exceedingly conjectural?—*A.* Yes.

Q. It is a fact, is it not, for example, that the calculation is made by estimating, of the numbers that are recorded in the Poll Tax, in 1377, that 15 per cent. of people who were liable were not taxed, and that then these persons who were liable represented two-thirds of the population?—*A.* Something of that sort the calculation is made on.

Q. That is rather a rough approximation?

Q. The point we were on was practically your opinion as to how far the conjectures that we can form may be said to give us any accurate evidence one way or the other. I was then going to ask with regard, for example, to the population prior to that, it is a fact, is it not, that quite good authorities —I mean people who have gone into these questions of the amount of land under cultivation—differ by about 100 per cent.?—*A.* In some places I think they do; yes; but they do not differ, I think, so much as to the relative amount at different times in the century. Does it not make it much the same?

Q. My authority, of course, is largely second-hand, but I was under the impression that Abbot Gasquet, in his work on the Black Death, quotes estimates as to the population, which vary from about 2,000,000 to 4,000,000?—*A.* I think he does; I have forgotten the point; I read his book.

Q. In regard to the question immediately following that point, whatever the population may have been, there is no doubt, I take it, especially from Abbot Gasquet's investigation in the Institution Register, that something between a quarter and a half of the population were killed by the Black Death?—*A.* Yes. I think that seems fairly definite, as far as any fact of this nature is definite at that time.

Q. That being the case, whatever the population was in the beginning of the century, it was reduced near the middle. Then, you suggest here marriages were singularly fertile. There is some difference of opinion on that point, is there not?—*A.* I was not aware of that at the time I wrote; you told me to-day there was some difference of opinion.

Q. The point is this; I should like to invite your opinion as to the accuracy of Creighton's statement. Creighton asserts that the statement that fertility was very great after the Black Death is a pure *a priori* dictum of Hecker's, and he quotes chroniclers of the period who make exactly the opposite remark. Have you any reason to suppose that Creighton is mistaken on that point?—*A.* I would not like to express an opinion until I had really looked it up.

Q. So it seemed at any rate, pending further investigation, it is a little doubtful, do you not think, whether the population was really increasing very fast at that point?—*A.* I went over every particle of evidence I could find at the time, and I was quite definitely of opinion after reading it all—that you must be able to put the population in 1400 at much the same as it was in 1300. That was my distinct reading

of the evidence, and I am quite willing if it is put at the lowest that the population was the same in 1300 and 1400.

Q. Assuming that that was so, how do you exactly differ in your diagnosis of the case from the Malthusian view, according to which you have after a great plague or a famine, or anything of that sort, a great many vacant places; that there is a natural tendency for them to be filled up; where do you differ from that?—*A.* The most recent condition resembling famine that there has been in England was in the early part of the nineteenth century, 1800–1820, and that famine was exceedingly severe in many places, and yet the population of Britain increased 14 per cent. in the ten years (1800–1810), increased 17 per cent. in the second ten years (1810–1820), though there was, according to Thorold Rogers, as nearly famine conditions present as there has been in England.[1] In some of the remote parts of the country, Orkney and Shetland, the population remained practically stationary between the years 1801 and 1811, and in the next ten years, still years of great scarcity, it increased 15 per cent. My own feeling is that given a certain energy of reproduction adverse causes do not have the same effect as they would have in times when the tendency towards a high birth-rate was not so great.

Q. Your difference from Malthus is that you believe that the relative increase of population was in spite of adverse conditions in the way of sickness and mortality, whereas Malthus would have held that you get an increase because of the empty spaces made?—*A.* I do not mean to say that Malthus is not quite right up to a certain point, but there are more factors than merely the fact of the empty spaces; that there is a factor of variation of reproductive energy which acts independently of local environment for the moment.

Q. If you accept, at any rate as a portion of the explanation, the Malthus view, it makes it rather difficult, does it not, to decide in any given piece of evidence how far it has been your germinal activity, or how far it has been the economical condition?—*A.* It is just another case of multiple correlation.

Q. I was prompted to ask that, because with regard to the pressure of population in the Tudor days, has it not been suggested that the troubles, especially in the time of Henry VIII, were largely due to enclosures, and to a change

[1] Wheat at this period ranged £4–£6 per quarter as against £2–£3 per quarter 1820–1830.

in the methods of agriculture?—*A.* Yes, I believe that has been suggested.

Q. It may not have been a germinal activity so much as the land being differently used by the existing population?—*A.* In making the land much more productive; that may be argued quite fairly.

Q. There is only one point I would like to ask you in regard to the historical summary, and that is that even with regard to so recent a period as the eighteenth century, have you read Professor Gonner's Paper which he presented to the Statistical Society last year?—*A.* No,[1] I have not seen that. The evidence I give for Scotland because we happen to have had a Census in Scotland in 1755. There is a definite figure for the population, 1,265,000. That gives an increase of 26 per cent. in forty-six years, and in the next ten years there was an increase of 14 per cent., so that something happened that made a great change in the rate of increase of the population. That is a fact, however you may explain it. The period when the increase began is limited by two dates.

Q. There is the question as to its possible economical interpretation?—*A.* Yes.

Q. I should like to ask you this merely for the purpose of elucidating your idea; do you essentially correlate fertility, germinal activity, as being the cause of energy, or in what way do you correlate them?—*A.* What seems to happen in epidemiology is that you have a period during which energy is being stored up by an organism in some form or another. That energy is expressed in an epidemic and is exhausted. Until the organism stores up more energy there are no further outbursts of the disease. If you develop this idea, then it would follow that during certain periods racial energy is stored up, and that in really energetic periods it is liberated. This is shown both as regards the production of great men and as regards the production of numbers of people. I would associate these two, looking to the periods in between as periods of rest when energy is being regathered for another outburst, and when that period comes there is a further liberation of energy. Taking the heart as an analogy, there is a heart-beat which dies away, then a period of rest, during which something is stored up. With the liberation of this something the next heart-beat occurs. There is something like this happening on a very much larger

[1] This was a misstatement. I had read it, but it contained nothing which threw any new light on the subject. Later reference showed this.—J. B.

and a very much longer scale. Of course, that may seem very hypothetical, but there are so many places where you find the energy decays in a quite definite way. Take human life, for instance. We die practically in a geometrical progression. If you examine the progress of the death-rate for England among males, you will find that it is 18 per 1000 at the age of 55, 36 at 65, 72 at 75, 144 at 85, and 280 at 95, doubling in every ten years. There is a definite law in this case which must stand in the relation to physical chemistry of life. The same law is also shown in the early part of our life. If a child takes measles between one and two years, it runs a certain chance of dying, if it takes measles between two and three its chance of death is less, and from the first two terms you can predict the death-rate for each of the subsequent ages. Something which gives the germ a foothold or something which prevents the child attaining maturity decays in a measurable manner. This is shown by the death-rates up to eight, nine or ten years, when the figures cease. There are many instances where you get such things in life, and I think the variation of the birth-rate is one of them. I am quite willing that you should think this very theoretical, but when actuaries say that you can measure the chance of life to three places of decimals by using a geometrical progression as a graduating curve after the age of fifty-five is reached, there is obviously something definitely measurable in the rate of decay.

Dr. Saleeby. That is for the life of individuals?—*A.* Yes.

Q. You are arguing from the somatic to the germinal?—*A.* No, I am arguing through the somatic, because the same law approximately holds for the somatic; the geometrical progression holds for the somatic as well as germinal life.

Q. How is the somatic a germinal life?—*A.* The germinal life of the organism.

Q. That is not our germinal life?—*A.* No, I am arguing from our somatic life, then through the germinal life of an organism to our germinal life; that is my point.

Prof. Sims Woodhead. You are leaving out the question of acquired immunity?—*A.* No, I do not think so.

Dr. Greenwood. There is only one other thing in this connection; that your theory might be perfectly correct, might it not, without having a bearing upon the mere fact of the birth-rate; I mean in the sense of Dr. Schofield's question that one might conceive that these periods of rise and fall might be perfectly well marked in the life of a nation, and might follow a periodic law, while the birth-rate is

absolutely stationary?—*A.* Yes, that might quite well be, but then I think the evidence is rather the other way.

Dr. Newsholme. Have we any evidence one way or the other as to whether the death-rate does not vary more than the birth-rate, and so make fallacious your cycles; is not that your point?

Dr. Greenwood. That is partly my point. Practically my point is this: it seems to apply to some of the argument of the Witness, that just as regards the question of persons of great energy and ability, our historical data can only give us evidence regarding persons of certain types of ability. We know nothing about those who were able in lines which have not been recorded in history. Much in the same way these data can only give us a general impression of the state of the nation at any given time, and, so to speak, it might not be within the very field of our inquiry at all?—*A.* Of course, that view can be taken. It is very difficult in a subject like this, which is so complex, where you have just to pick a little bit of information here and a little bit there, and try and co-ordinate the whole, to give any set of figures which are not open to quite a large number of explanations. The figures for Spain seem, I think, moderately definite. There was a census in 1594 in Spain which applied to about seven-eighths of the country, and you find that from there up to 1797 there was a very, very small increase, and that the population has increased about 50 per cent. in the next sixty years. Now, the estimate for the Spanish population in 1400 was 4,000,000, half that at the date of the census. Of course, it is an estimate again, but I think a likely estimate; it is the one Zimmerman makes in his history.

Q. There is only one other question I should like to ask, and that is how far you consider that fertility and mortality are associated?—*A.* It is quite obvious that a population will increase if the death-rate goes down or if its birth-rate goes up. It is really a point that you cannot absolutely settle by argument, but as a matter of observation. When I get my population of guinea-pigs going up or my population of rabbits going up, and I sometimes have a very large population of these—it is because of an increased birth-rate; it is not because the death-rate falls. I think personally, if you are to have an increase of the population it must be rather from the point of view of an increased birth-rate than from a fall in the death-rate. Another opinion might be held, but I am very strongly of the opinion that this is much the more probable theory.

Dr. Newsholme. I suppose you agree that argument by

analogy is a somewhat dangerous method of argument?—*A.* Yes.

Q. And the whole of this theory of yours is based on an argument by analogy?—*A.* Yes; it is the only argument, as far as I see, possible.

Q. And such arguments hold out great liabilities to error?—*A.* Yes; I admit that.

Q. I take it as an alternative to the hypothesis you have put forward as to the increase of racial energy and vitality that when the bursts of high birth-rate occurred there had been great gaps reducing the population, and therefore room and livelihood for a larger number economically. In other words, of course, the two are not mutually exclusive; the two might be running together; but if it can be shown in all cases where you hypothecate increased racial energy there was at the same time an increased amount of room economically for a large population, it would to that extent diminish the value of your argument as to racial energy?—*A.* It would, certainly; it is a question again of multiple correlation.

Q. Then, in regard to the question of the storing of energy, that means storing of racial energy for a number of generations, does it not?—*A.* Quite likely.

Q. It must be so; in these long historical records of which you spoke, in some cases 200 or 300 years elapsed between the big rises in the birth-rate?—*A.* Of course, you have historically a great series of exoduses from Arabia, which occurred at very long intervals from the time going back into the early Conquest of Babylonia; I think four great migrations from Arabia.

Q. Does not your hypothesis of the inheritance of racial energy for several generations running involve the hypothesis of people living quieter lives?—*A.* No; I do not think so. It means that people are living at a lower level of actual energy; they might have more energy to store up. If you are living a quieter life you may be storing up more energy than if you are living a very energetic life. I would say there is a certain amount of evidence that people who live excessively energetic lives are not the best parents.

Mr. Hobson. With regard to the general position, did you not concede a little more than you intended in your answers to the early questions of Dr. Greenwood, when you practically abandoned your statistical evidence and fell back on other sorts of evidence? Did you not mean that although each of these pieces of back statistical evidence might be rather shaky in itself, an accumulation of shaky

pieces of evidence, if it were sufficiently large and varied, might make a fairly substantial basis from which to argue? —*A.* Yes, I meant that.

Q. You do think that the statistical basis, even as regards England, where notoriously there was not any very close basis, but by taking a number of cases, added something to that hypothesis to support it?—*A.* My reading of the history was that these must be essentially the facts, and collectively they were essentially the facts.

Q. Although any one of them might be mistaken; although you might have attributed to this case what was due to some other case, still if you take all the cases you could find where this phenomenon happened, that you would be able to prove causation along the lines you suggest?—*A.* The different cases give a fair amount of evidence in favour of that.

Q. Then again, on the question of scarlet fever, you produce some evidence for saying that there was a periodicity in the modern play of scarlet fever; would you say there was periodicity in zymotic diseases taken as a whole? —*A.* Oh, yes, I think so.

Q. Would you find they correspond roughly or closely to the periodicity of scarlet fever taken separately?—*A.* If you take fever, the periods are longer.

Q. A different periodicity?—*A.* A different periodicity.

Q. If you take the zymotic diseases as a whole you would not find this?—*A.* No, the periods of measles are different.

Q. Would you find any law of periodicity apply to them as a whole?—*A.* Measles is very suggestive, but we can only get statistics in regard to measles for seventy-three years. If we could get back for another hundred years, now, many interesting facts would, I am sure, be found out. We can only get statistics from 1840.

Q. Turning to the question of the Black Death, it is admitted, of course, that after the Black Death one of the first results was a considerable rise in the real wages of labour in this country?—*A.* Yes.

Q. That would lead at that time to earlier marriages and the possibility and probability of the support of a larger proportion of the children that were born?—*A.* Yes.

Q. Which itself would very largely explain, apart from any natural wave of fertility, what took place in the way of a rapid increase of population?—*A.* Yes, that might be quite sufficient, but the evidence seems to be that the opposite took place in France. As far as there is any evidence there was not the quick return to the population.

Q. As far as these historical cases are concerned, there are several alternatives. One of those is the alternative of more room owing to so many places having been left vacant, and the other is the emigration of population which would apply to a considerable extent to the rapid increase of the population of England in the early part of this century, and even at the close of the last century, an emigration very largely from Ireland, if I remember right. Then, of course, there will be the importation of food, which also began to come in and enabled a larger proportion of the population to be supported, that is to say, a larger proportion of the children born in the different families to survive; and finally there were the improvements in the arts of agriculture, which were fairly coincident. Those three cases were fairly coincident in the latter part of the eighteenth and the earlier part of the nineteenth century. Would they not in themselves form an adequate explanation of the rapid growth of population that seems to have occurred then? One admits the evidence about the slow growth of population in the earlier part of the eighteenth century.—*A.* Of course, that can be perfectly well argued. I was quite familiar with that side of it when I wrote. I did not want to deny that point of view at all.

Q. Our investigation is primarily into the reduction of the birth-rate which has been taking place within the last thirty-five years?—*A.* My point as regards that is this, that these periods before have been roughly two hundred years; if you accept them at all. Thirty-five years is far too short a time on which to base conclusions.

Q. So that the natural decline in fertility happened to coincide with the introduction of artificial methods of restriction?—*A.* Yes. Sir Shirley Murphy holds similar views about the fall of the birth-rate. Have you seen his paper?

Q. No, I have not.—*A.* I have brought one with me to-day.

Q. Your theory associates quantity with quality of population to the extent that a high stimulation of fertility will express itself both in increased numbers and in high ability or genius, and there is no opposition, so to speak, but there is a harmony between the quantity and the quality of the population, so a high pressure of life will exhibit itself in both forms?—*A.* My impression is that that is what is associated generally in history.

Dr. Schofield. May I ask for my own information, because I am not clear in regard to Dr. Brownlee's position

as to these periodic waves up and down, which are most interesting, whether the ground for his opinion is based upon the birth-rate? It seems to me to be so.—*A.* As regards history.

Q. My difficulty, of course, as you will readily understand from my previous question, is that the birth-rate seems utterly valueless apart from the death-rate?—*A.* You must have the two.

Q. You have to consider the two?—*A.* The increase of the population, apart from the emigration, must be the difference between these two, and I think the difference between these two must be for the most part associated with difference of birth-rate.

Q. Yes; but with an increase of the population could we not get a falling birth-rate and yet an increase of the death-rate?—*A.* Yes.

Q. Is that taken into consideration in your figures?—*A.* It cannot be. I have not got figures to take into consideration.

Q. Would not that interfere with the argument of the wave; would it not vitiate the conclusions?—*A.* No; you have another kind of wave then.

Q. But it would vitiate the special waves that we are considering?—*A.* It will make a different interpretation of these special waves.

Mr. Hobson. The waves will be different, will they not?—*A.* The waves will be different.

Dr. Schofield. We are really inquiring into birth-rate here; we are not inquiring into death-rate, but when we come to figures like these, which seem to depend upon the correlation with the death-rate, otherwise there may be no wave at all, it may appear to be a wave, but there may be no wave as regards the increase of birth-rate?—*A.* In the fourteenth century there was an immense death-rate.

Q. The increase of population does not mean necessarily either increase or decrease of birth-rate, therefore population does not bear directly upon our question here. We are not considering the birth-rate correlated with the death-rate; we are considering the positive birth-rate. Whatever the death-rate may be at the present time we do not mind?—*A.* That is perfectly true.

Q. Is not that the point, sir?—*A.* My point is, it seems to me much the easiest explanation, the fact that the birth-rate varies.

Q. It is a most alluring and fascinating thing, the death-rate at five years of age in certain districts is 50 per cent.;

the death-rate within twelve months, we will say, in some districts is 50 per cent.; in others it is not 10 per cent. Well, of course, that entirely makes the difference of the wave of the population?—*A.* Oh, yes; but I mean in those districts where it is very high you have a much higher birth-rate; the birth-rate and the death-rate are associated to a certain extent.

Q. At any rate, to me it seems a most interesting hypothesis you have brought before us here. It does not seem to me it will help us directly on our Birth-rate Inquiry unless it can be shown, not that there are waves of increase of population—that I care nothing about—but waves of increase of birth-rate, and they are not the same necessarily, I submit?—*A.* Yes. I am quite willing to admit that that point can be argued perfectly well. My side of it seems to me most probable. Of course, I really wish to lay my hypothesis before you to-day more because of the fact that I think those things are not simple; they are excessively complex, and that, in considering it, you should have all kinds of evidence in front of you. Supposing it is found out that my hypothesis is quite wrong, I will not feel in the end particularly sad; nothing in Science is stationary. I thought, however, you might like to hear one side of the question.

Principal Garvie. Would this be a fair representation of your position, that you are led, on other evidence, to assume that there is a law of periodicity in vital phenomena?—*A.* Yes.

Q. And that, therefore, the presumption is that there will be this law of periodicity affecting the birth-rate; would that be the second stage?—*A.* Yes; you can say that.

Q. Therefore, you have collected evidence which seems to support, or rather answer, the question affirmatively which you have put to the evidence?—*A.* Yes.

Q. You admit, however, that some of the evidence might be otherwise explained than the way in which you explain it?—*A.* Yes; I perfectly agree.

Q. You admitted that your argument was an argument from analogy; I venture to say that in your own mind it is more than an argument from analogy; you actually have in your mind, so to speak, an induction that may be quite an inadequate induction, based on certain data that there is a law of periodicity, and therefore you assume that this is another instance of the same law of periodicity, therefore it is not strict argument by analogy?—*A.* There is a certain amount of induction in it, I admit.

MONSIGNOR BROWN. You have alluded to the deliberate prevention of fertility in certain parts of Glasgow; have you any evidence on that, extending say down to the working-classes? I do not mean evidence that is statistical evidence, but evidence based upon what you gathered from practitioners and so on?—*A.* There is no question there is among the working-classes a good deal of attempt at restriction, but, going over my own college friends, we have not reproduced ourselves. It was not that we did not want children—I only have one child; I consider it a sin to have only one child; a sin to the child; it is not a question like that. Taking my father's friends, they had quite different families from what my college friends have got. My father had a wide circle of college friends, whom I knew, and they all had bigger families than my circle of college friends have to-day.

MR. HOBSON. Did they marry earlier?—*A.* No; on second thoughts, perhaps they married earlier.

DR. SALEEBY. This is natural infertility on the part of your college friends?—*A.* Natural infertility.

DR. NEWSHOLME. Have you any evidence of that, or is it your general knowledge?—*A.* Some of them you dare not mention children to, because they feel so much upon the subject.

MONSIGNOR BROWN. Would you put it down to both partners; to both sexes?—*A.* I would put it down to both sexes.

THE SECRETARY. Due to higher education?—*A.* I do not know what it is due to. Of course, we were sinfully over-educated in my time; when you went to the school at nine in the morning and stayed there till four o'clock in the afternoon, and then came back to do three or four hours' study at night.

Q. Is there any kind of propaganda going on among the working-classes upon the subject?—*A.* I really do not know; I think there is a certain amount quietly.

The Witness withdrew.

Note added February 25, 1916.—With this evidence, given two years ago, I am still in substantial agreement. I can now prove that the birth-rate or the fertility increased markedly during the last years of the eighteenth century, and has been declining since about the year 1840. This will shortly be published.—J. B.

Meeting.—January 21, 1914.

Chairman.—The Right Rev. Bishop Boyd Carpenter, K.C.V.O.

Witness examined.—Dr. J. W. Ballantyne.

Précis.

What I have to say must necessarily be chiefly regarding the obstetrical sides of the subject—regarding birth and the nine months which precede it.

Since 1887 I have made a special study of the antenatal part of life, and have published some half-dozen books and some two hundred articles upon it. This is linked on to the Falling Birth-rate in two ways—

1. It may be that there are some things in the nation's life such as syphilis and alcoholism (among the diseases) and meat-eating (among the habits) which are lessening the number of impregnations or (more probably) increasing the number of deaths before birth (in the form of early or late miscarriages or dead-births at the full time). If this be so, the more we can find out about the life before birth (its health and its diseases) the better.
2. Even if these antenatal things have nothing whatever to do with the falling birth-rate—even if, in a word, the fall is largely or wholly due to voluntary restriction of impregnation by " checks " and to destruction of the fruit of the womb (criminal or nominally medical)—still the antenatal aspects of the subject are of tremendous importance, for they *supply us with a means of counteracting the effect of the fall in the birth-rate* and so restoring equilibrium in the numbers of the nation's population. Even if the birth-rate fall another 5 per 1000 or so there are lives enough to be saved immediately after birth as well as before it to make up the loss. The birth-rate at present is aggravated by the high infantile mortality in the first year of life, whereby the babies born fail to come to manhood; by lessening that death-rate we can *virtually* add to the birth-rate. Again, many impregnations never come to the birth—how many is not known, but very many—and by bringing them

to the birth (by treating the mothers and in other ways) there is another method of increasing the birth-rate and so of apparently (not really) checking its fall. Of course each of these considerations has many sides, to which attention must be paid.

It is clear, therefore, that antenatal hygiene and pathology have their contribution to make to the problem of the falling birth-rate in either case; they may be themselves causes of the fall, they certainly open up possibilities of counteracting the fall.

If it be taken for granted that the fall in the birth-rate in these islands is largely the result of voluntary artificial restriction either of the impregnations or the births, then it seems to me that there is little to be hoped for for a long time in the direction of a real ascent of the birth-rate; indeed, I think we must face a further fall. What, then, is to be done?

A. The gradual building up of a spirit of self-sacrifice or of *rational* foresight which shall make it possible for parents of the good classes (good intellectually and morally as well as physically) to have again the larger families (I do not mean fourteens and fifteens) which used to be common. The extra baby must be weighed against the motor car, and must be recognized as of more immediate and future value than the car or any other thing not absolutely essential to well-being although conducive to comfort. Motherhood and parenthood must be exalted.

B. The discouragement of those conditions of our present life and society which make it almost essential that certain individuals (men or women) should remain childless in order to earn their living. Under this heading may be considered the means of encouraging parenthood, financially, by relief of taxation or giving bonuses, etc., etc.

Along a different line much may be done.

1. Statistics of still-births, abortions, dead-births, etc., must be got, if necessary, by the introduction of a Still-births Registration or Notification Bill. Then shall we know how many antenatal lives are being lost every year to the nation. Gradually we may get the causes of the still-births, abortions, etc.,

reported, and thus not only know how many deaths occur before birth, but also get facts which may enable us to check or prevent these antenatal disasters. We should also wish to know how many of the lives thus lost would be worth saving.

2. There must be much more care given to the expectant mother, medical, dietetic, as regards her work in factories, etc. Pregnancy must be made as comfortable and as free from irksomeness and danger as confinement has been made painless and comparatively safe. The question of pre-maternity hospitals, homes, wards, etc., of women's work in factories, etc., must all be considered here.
3. Much more study must be given to the diseases of pregnancy which at present are so deadly to mother and child, such as convulsions, excessive vomiting, jaundice, nervous maladies, etc. All things concerned with the damaging of the life of the unborn infant must be investigated; we must try to find out the cause of antenatal death, disease, and deformity, so as to prevent these disasters.
4. Yet more study must be given to making confinement safer than it is for both mother *and child.* The operations which are destructive to infantile life must be still more carefully scrutinized, and, if possible, replaced by others which give the child as well as the mother a chance of surviving. The Church as a means of educating parents as to the tremendous responsibility they incur when they demand that the doctor shall do a craniotomy in place of a Cæsarean section, etc. Under this heading should be considered the effect of the Midwives Act, Maternity Benefit, etc.
5. The reality and value and independence of the life in the womb before birth must be taught in accordance with the facts of biology, and many things in the phraseology and practice of the law courts and in the teaching of the Church must be reconsidered in the light we now have of antenatal hygiene and pathology.
6. Close scrutiny must also be given to all the reasons or excuses which are given for bringing on miscarriages. There is a very big medical question involved here, *e. g.* terminating pregnancy to save the mother's life or cure her disease in such a malady as tuberculosis—literally sacrificing the child for the mother; and it is very difficult, and extraordinarily open to abuse.

Dr. J. W. Ballantyne called.

Chairman. I think the members of the Commission will allow me to express to you our grateful thanks for your kindness in coming.

Dr. Newsholme. I gather you propose to give your evidence under two headings; one is as to the causes, apart from voluntary restriction of the birth-rate, which may reduce the birth-rate, and the other is as to the saving of life by prevention of disease, such as syphilis?—*A.* Yes.

Q. On the first of those, you mention the question of meat-eating as a possible cause of the diminished birth-rate; could you inform the Commission of evidence on that point?—*A.* With regard to this matter I interviewed Dr. Chalmers Watson, whose experimental work upon this subject was published some years ago, and I asked him, "Are you of the same opinion as you were at that time, from your experiments, that meat-eating, a purely meat diet, in the case of animals produces sterility more or less complete?" and he said, "Yes." But he added, "I would like to say that the conditions were very severe." I had not time to inquire into the whole matter, but I understand that they were conditions which would not likely occur in the human subject.

Q. Those were experiments made on rats?—*A.* Yes.

Q. It would be going farther than any facts we have in our possession at present would allow us to go, to apply these experimental results to the case of human beings?—*A.* That is my idea.

Q. So that, speaking broadly, one cannot say at the present time that one has any satisfactory evidence that a greater amount of meat-eating which has taken place in recent years has been an important factor in reducing the birth-rate?—*A.* I would put it this way, that of the three causes syphilis I would doubly underline, and the other two I would be inclined to put in small type; that is my feeling about it, that alcoholism and the meat-eating should be put in small type.

Q. Have you any figures bearing on the prevalence of syphilis as a cause of still-births?—*A.* My figures are experiences in my practice; these are the only figures I can give. I have had clinical histories supplied to me by hospital, and even by private patients occasionally, in which something like four, five or six still-births or miscarriages have followed syphilitic infection, ending in time in the birth of a living child who died in a day or two,

sometimes of a child who lived a few weeks, and then perhaps later on, as the syphilitic virus got attenuated, of living children who survived and showed no marked sign of syphilis.

Q. Do you know that the proportion of still-births to live-births varies according to different figures, say, from 2 to 6 per cent., in some countries it appears to be even higher, and the proportion was that 4 per cent. of the total births are still-births? Could you give me any idea of your impression as to the proportion of the number which is due to syphilis?—*A.* No.

Q. But you would hold the view that the proportion of still-births due to syphilis is considerable?—*A.* Yes, I would hold the view that it is a considerable proportion; founding upon Fournier's evidence in France, for instance, where he speaks broadly of families being swept out of existence before birth by syphilis.

Q. So that if measures by public authorities could be taken for the early detection of syphilis and its adequate treatment the birth-rate thereby would be considerably increased?—*A.* Yes, certainly.

Q. The live birth-rate?—*A.* Yes, the live birth-rate, and the birth-rate of healthy as compared with diseased individuals.

Q. The two would run together?—*A.* I think so.

Q. So that the prevention of syphilis is one of the great means that needs to be taken for preventing the decline of the birth-rate?—*A.* That is my view.

Q. You say, "If it be taken for granted that the fall in the birth-rate in these islands is largely the result of voluntary artificial restriction either of the impregnations or the births, then it seems to me that there is little to be hoped for for a long time in the direction of a real ascent of the birth-rate." May that be taken to imply that appeal to civic patriotism is not likely to be successful in regard to this practice?—*A.* Yes, but that is simply a statement of opinion.

Dr. Schofield. To turn to syphilis for one moment before leaving it; it is so important: have you any reason to believe that deaths or miscarriages from syphilis have increased materially since the lowering of the birth-rate? That is the point; since the lowering of the birth-rate have you any evidence that syphilis is much more mortal than it used to be?—*A.* As regards Scotland, the only bit of evidence I can give on that matter is second-hand. Dr. Craufurd Dunlop has been dealing with the new Census

Returns in Scotland, and, as you will see from the papers this morning, he has been trying to prove to the Venereal Disease Commission that there has been a drop in the amount of syphilis in Scotland.

Q. Certainly, that is what I thought.—*A.* That is all one knows of it; what one finds out from seeing cases frequently in hospital is not very much (from the standpoint of statistics).

Q. Whatever the mortality may be due to, it has nothing to do with our question of the decline of the birth-rate; would you agree to that? If syphilis is less, the birth-rate ought necessarily to be higher if it is a bad factor, but it is lower?—*A.* It may be one factor, of course.

Dr. Newsholme. Even if we accept the view that syphilis has declined in the last ten years, which is a moot point, you have no doubt whatever that it is still an important cause of miscarriages?—*A.* I hold that in a given family if syphilis enters it is the most deadly thing for the future of that family.

Q. You speak of the importance of having a registration or notification of still-births. Have you a Notification of Births Act in Scotland as in England?—*A.* Yes.

Q. Has it been adopted universally or only partially? —*A.* It was adopted very early in Edinburgh, and I believe in the big towns generally.

Q. You are aware that where it is adopted it has given you to a very large extent what you want—the notification of still-births after the twenty-eighth week of pregnancy? —*A.* Does the notification of births give that?

Q. Oh, yes, so that for the half of England roughly, and an unknown portion of Scotland, you already have information about still-births?—*A.* Yes, we get postcards at the Maternity Hospital asking us to tell the condition of the infant at birth; I suppose that is what you mean?

Q. Not only that; if the Notification of Births Act is in force, somebody at your Hospital is under an obligation to notify each birth, whether alive or dead, to the Medical Officer of Health of Edinburgh?—*A.* That is so. We now, however, come up against a difficulty; the definition of still-births.

Q. It is defined in the Act as any termination of pregnancy after the twenty-eighth week; not in these words, but that is the substance of it. I only mention that because it is partially accomplished already, but it is true that up to the present time very little public health action has been taken as the result of that.—*A.* The action of the Act

probably explains why in some reports there have been estimates of the amount of still-births.

Q. In the next sentence you suggest the importance of finding out the causes of still-births and abortions. That means very considerable investigation, does it not, into individual cases?—*A.* Yes.

Q. Would you recommend for that purpose the establishment of Public Health Laboratories in which exact examinations could be made, for instance, as to whether there was infection or not?—*A.* Might I at this stage read a sentence or two from the Address which I gave last night at York which bears upon this?

Q. Please.—*A.* I think it has a bearing upon the thing we are talking about. I said, "As a necessary corollary of the pre-maternity ward comes, or ought to come, the pathological department of the hospital. It is a remarkable fact that not a few maternity hospitals have no pathologist on the medical staff (Edinburgh Royal Maternity Hospital has now). Not only is a pathologist necessary for the performance of post-mortem examinations upon the mothers and new-born infants who may die; but he is needed also for the great mass of pathological material, consisting of dead-born children, of infants who have died in the birth, of monstrosities, of abortion sacs (normal and morbid), and of placentas of all sorts. . . . It is a somewhat strange thing that I have been writing now for more than twenty-five years upon the subject of ante-natal pathology, basing my inquiries largely upon the material made available to me through our maternity hospital, and yet that material in other hospitals is so often treated as if it had no interest and called for no investigation. It may be that I have laid too strong an emphasis upon antenatal pathology, but I am encouraged to find Dr. Amand Routh making an appeal to the profession to call for the appointment of pathologists in all maternity hospitals to carry out researches upon this very kind of material." That is to say, in order to find out the cause of still-births.

Q. There you have very strongly stated your opinion that such pathological inquiries are very urgently needed in regard to still-births?—*A.* Yes.

Q. And in connection with that, would you recommend that Public Health Authorities also should be advised to provide facilities for tests of syphilis in pregnant mothers? —*A.* Certainly.

Q. But there are women who do not come to Maternity Hospitals, for whom it is equally necessary that the diag-

nosis of syphilis should be made?—*A.* Certainly; if, of course, the preliminary difficulty of consent can be easily got over.

Q. That is the great difficulty?—*A.* Yes, certainly.

Q. I notice in the last paragraph you refer to the cause of the enormous number of miscarriages. Have you any evidence as to the amount of miscarriage due to tampering with pregnancy either by means of lead pills or mechanical means; to what extent it is in practice?—*A.* Personally I have very little evidence upon that subject at all.

Q. You know there is a practice said to be common in some parts of the country of buying lead plasters and making them up in small pills, and then handing them out to mothers?—*A.* I have been told that in some parts of Staffordshire there is a great demand for lead plasters, and that children buy them and take them home to the mothers; but that is simply what I have been told.

Dr. Greenwood. Is there any condition, with your many years' experience, that you regard as prejudicial to the chance of a live-birth which has increased relatively in your experience? Syphilis you regard as a great absolute cause; supposing you could eliminate syphilis, would you necessarily increase the actual number of live-births? But perhaps we should agree there is no evidence that syphilis has increased largely. I gather that from your answer to Dr. Schofield. But is there any cause which has increased relatively? There are a certain number of conditions which, in your judgment, will be prejudicial to the child before birth, have you any evidence to give us of any conditions which have increased in frequency, any habits, apart from the question of meat-eating, and so on, which you do not attribute much importance to?—*A.* I do not think that I have ever thought of that. I do not know that there has been any difference in anything that I know.

Q. As far as your own personal experience, which is very extensive, goes, there are no conditions prejudicial to infant life before birth which are more frequent now than they were thirty years ago?—*A.* There is the attitude of the Medical Profession towards the induction of what is called therapeutic abortion.

Q. What I am trying to get at is simply this, the decline of the birth-rate is really our principal subject, and that being the case we want to get at causes which would tend to lower the birth-rate, which are not absolutely great, but which are relatively greater than they were?—*A.* Yes, well, I can say this; that I am very often asked now about such

questions as whether a woman who is suffering from phthisis —consumption—if she is pregnant should be allowed to go to the term of her pregnancy. Some very difficult questions have been asked me in the last few years on that, and the Medical Profession is divided very strongly on that matter, some thinking with the German school, who think that on the whole the wisest thing is to end the pregnancy as soon as possible for the sake of the mother; others rather being of the opinion of what has been called the French school in this matter, that as consumption in pregnancy is a very hopeless matter for the mother they would rather give the child a chance and let the pregnancy go on. I think in our own land here most of us try to keep both these things in mind, and to pursue a middle path.

Mr. Hobson. Which of these is gaining?—*A.* Well, of course, again, it is a matter of opinion, but my own feeling is that there is an increase in the ease with which a doctor justifies or sanctions the ending of a pregnancy.

Dr. Greenwood. Is there any other cause in the same group that we ought to have before us?—*A.* You mean along that line in the way of criminal induction, apart from medical purposes?

Q. No; are there any habits, for example, that come before your notice as a physician, apart from actual induction of labour, which would in your opinion be likely to induce premature labour?—*A.* Contraceptive means, do you mean?

Q. After conception, I mean; apart from actual interference?—*A.* Well, my experience about that is limited, because I think it is pretty well known that I have given it out pretty widely that I want to save antenatal life, and not to destroy it, and that consequently people do not come to me for the latter purpose. But I have had experience, and if the Commission will bear with me I would just give one instance. There was one day some years ago, four or five years ago, that there was a lady called at my house. She said, "I do not wish to give you my name, but I wish you to tell me if I am in the family way?" It did not take very long to tell that; it was quite simple. I said, "You are." She said, "I wish you very much to take in hand the destruction"; I am not giving you the exact words, but she meant the ending of the pregnancy. I said, "Why?" She said, "It is not convenient just now to have a child." I tried to talk her out of it, but I found she was quite set upon it, and I said, "I do not do that sort of thing," and she said, "Oh, I thought that doctors did it," and she rose up and said, "Then, I suppose you can do nothing

for me?" I said, "No." I did not say I was sorry; I just simply said, "No, I can do nothing for you," and then she got up and went towards the door. I said, "Before you leave I would like you to have the three reasons in my mind at the present moment which led me to give you the advice I have given. In the first place the life that you are talking about is a life; it is not a negligible quantity, it is a life, and I do not wish to destroy life. In the second place the operation that would be necessary for it cannot be done with absolute safety to the mother, and I do not wish to do anything which would endanger your health; but in the third place I do not wish to do anything which might make me liable to penal servitude." She said, "I suppose you expect a fee for this?" I do not know whether the Commission think I was right or not, but I said, "No, I do not; I would like to show you to the door as soon as possible." I might tell another story which did not happen very long ago. A lady came to me and told me this family history. When she and her husband were married some ten or twelve years ago her husband was in circumstances when a family appeared to them almost an impossibility financially, and they took measures that there should be no children. After a time their condition improved and they relaxed these precautions, with the result that she gave birth to two children. These children grew up to the age of four or five; then they took ill and died within a few hours of each other. She went through a terrible time of strain, and after some months began to feel that everything was wrong in the world and everything else, and then after some two or three years she came to me just a few months ago to beg me to do some operation which would restore her power of bearing children. Apparently the birth of the children, from what I found, had damaged her, and she was rendered incapable of conceiving again in her then state. I operated some time ago, with what result remains to be seen.

The Bishop of Birmingham. You consider the financial question is the determining question, as a rule, with regard to whether they should have children or not?—*A.* This was a woman of marked mental and moral character. I should say she was a clever good woman, but she and her husband felt that pregnancy should not occur at first, and then when they felt it financially could be they were willing for it to be; then the deaths of the children made her think that heaven and earth were against her, or something of that sort.

MONSIGNOR BROWN. How long was the restrictive period; four or five years, or two or three years?—*A.* The whole story is one of about twelve years' duration.

CHAIRMAN. But you do not mean to imply that the restrictive time had somehow or another upset Nature and caused, at any rate, the children who were born to be delicate?—*A.* No, I think there was no definite evidence of that, except thus far, that she was an older woman and that the confinements, I think, were more difficult, the children being very large; they were 10½ lb. babies, both of them, and their size damaged her at the time of their birth and prevented her having any others afterwards.

Q. But you do not connect it with the restrictive period? —*A.* I do not refuse to connect it, but I do not know.

THE BISHOP OF BIRMINGHAM. In that case the financial question was the question which actuated their minds, apparently.

MONSIGNOR BROWN. Was this woman following any profession or anything?—*A.* No. I am sorry, Dr. Greenwood, if I interrupted your questioning, but I wished to tell these instances some time to-day.

DR. GREENWOOD. My chief point was that the medical induction of abortion may possibly be an increasing cause. In cases where there is a matter of doubt whether it is desirable the benefit of the doubt is more frequently given to the mother now than it used to be?—*A.* Yes, I have said again in this address which I gave last night about that subject: "Even therapeutic fœticide or medical induction of abortion must be kept within bounds and each case scrutinized closely." My reason for saying that was that it has struck me in consultation work that doctors were much more ready to consider induction of abortion for various diseases now than they were some ten or fifteen years ago.

Q. If I am not mistaken, the question arises mainly in phthisis, does it not, and also in syphilis and other affections?—*A.* Yes, for phthisis.

Q. Phthisis is diminishing, is it not, as far as our statistics tell us?—*A.* I would refer you to Sir Robert Philip; I do not know very much about that for Scotland.

Q. You see, my point is, you have to make the equation if the practice of the induction of abortion is increasing that the number of cases in which it might be used is diminishing?—*A.* You are looking to the future.

Q. Well, at present as compared with thirty years ago! The important point is, I am trying to assess what is the

probable importance of this case grouping as a factor in lowering the birth-rate?—*A.* Yes.

Q. As I take it, these practices could only arise when certain diseases are present. If these diseases are diminishing, at least as to one of them, then even an increased therapeutic use of induction of labour or of abortion would not be a very serious factor?—*A.* Yes, sir, the termini of your question are very wide apart, and there is an uncertain chain, I think, a very thin chain, connecting the two together in practice, but logically I think you are quite correct.

Q. You see the point I am getting at; that supposing, for example, we were, as a Commission, to recommend that therapeutic induction of abortion is a matter that ought to be carefully considered if it is only as a case group; if it is the actual number of possible lives that are destroyed by that process is very, very small, it does not become a very important matter from my point of view?—*A.* Yes, I see quite well what you mean; on the other hand, of course, the frequency with which induction of abortion is being done now might overtake, as it were, the reduction on the other side. It is a variable.

Q. There is only one other question I have to ask you. Dr. Brownlee gave evidence before us some weeks ago, and he produced some evidence which seemed to him to show that there is a real decline of fertility. One of his pieces of evidence was that people who wished to have children could not get them. Have you any reason to suppose from your practice that obligatory sterility, apart from any question of the result of syphilis or any great infecting disease, is on the increase?—*A.* By obligatory sterility do you mean incapacity to conceive?

Monsignor Brown. Do you think that, apart from what may be done by a professional man, there is any considerable amount of abortion procured irregularly by midwives or by other women, and also by men who have been struck off the Register?—*A.* Yes, I think there is, but the difficulty is to get any proof except in this way, and this leads me to bring before the Commission what I think is probably one of the most valuable things that has been done upon this subject. It is Dr. Max Hirsch's book, (published 1914), upon abortion-producing and preventive methods in connection with the falling birth-rate in Germany. It ought to be studied by the Commission.

Q. Have you any considerable practice among the industrial classes?—*A.* No; except through the Hospital, where

they come as abortions, and we do our best to treat them in the best possible way.

Q. You made a sort of *obiter dictum* that it was impossible to produce abortion without very grave risk to the mother in what you said to that lady?—*A.* That lady, I may say, was about five or six months pregnant, when I think there is more danger.

Q. You never have heard of methods which are adopted about that age, which are peculiarly skilful, and which can induce a natural labour?—*A.* No; I have not heard of that, but I have said this to my class. I may say that, in addition to a class of midwifery for men students I have been teaching a women's class since 1889, and last winter I was speaking upon the advantage of complete asepsis in treating abortions, and I said that abortions could be made very nearly safe by means of asepsis, and one of the ladies in the class got up and made this somewhat startling remark. She said, "Then you mean to say that Nature does not punish crime." I said, "Not if there is good asepsis," and her remark following upon that was, "Then you may do away with the whole laws of our country, and abolish them all."

The Dean of St. Paul's. I notice in your third paragraph you speak of restoring the equilibrium between births and deaths. Considering the births at present outnumber the deaths by five to three, I do not see how the equilibrium could be restored by increasing the disparity to six or seven to three?—*A.* I suppose I should have said restoring the disproportionate equilibrium.

Q. And all through your Précis the assumption runs that the fall in the birth-rate is a great misfortune?—*A.* Do I say that?

Q. Is it not the case that now it is almost a rule for the medical man to tell the parents that there ought not to be another child, say, for two years, and in some cases for three years? I suggest that that advice is much more frequently given now than formerly; that it is a very good thing that it should be given, and that that probably has had a great effect in reducing the birth-rate?—*A.* I think there is no doubt that doctors do say that; I think so. I am very often asked, and I have always said that the reasonable time for nursing the child, whether the child is nursed by the mother or not, should be observed, which is about a year.

Q. Would you not say that thirty or forty years ago the advice was much less frequently given by doctors?—*A.* Yes.

When I started practice I do not think we were asked that, or ever gave that advice voluntarily, when the next child should be.

Q. Among people capable of self-restraint, that would have the effect of reducing the birth-rate, if that advice were given?—*A.* I have given that advice once or twice myself, where there have been very dangerous confinements, and in the cases of which I am thinking just now it has certainly been followed; there have not been any more children.

Q. On the other hand, is it not a fact that thirty or forty years ago, a reasonable time for nursing the child was much more frequent, and therefore the advice was not so much needed?—*A.* I agree; with this reservation, that I do not find women less willing to nurse among my patients, but they are less able to nurse, and I have a very interesting case of a lady who is well known as a hockey player. After her baby was born, she said, "Am I to nurse?" I said, "Do you wish to nurse?" She said, "Certainly." I said, "Why not?" She said, "You wait. We hockey girls are not able to nurse our babies." I said, "Oh, nonsense!" She said, "Oh; well, you will see." We tried for three weeks, very fairly, I think, and honestly I must say she had not the milk. I have told that story to several; but we know hockey girls who are able to nurse; I do not think there is much in it except the view of the women themselves.

Q. I was not meaning willing, but the power, the capacity seems to be lost?—*A.* That is my opinion, that they are equally willing, but certainly I find in my kind of practice that they are not so able.

Dr. Newsholme. On that point might I ask one question? Are you quite clear that there is any diminution in the physiological ability to suckle children, or is it not rather that the class of patients who cannot suckle are more likely to come to you as a specialist? Are you able to distinguish between the second cause and the first?—*A.* It is a balancing of the two things. I think it is quite possible your second explanation may account for some cases.

Dr. Schofield. May I ask you to elucidate a little more your reference, "If it be taken that the fall in the birth-rate in these islands is largely the result of voluntary artificial restriction either of the impregnations or the births, then it seems to me that there is little to be hoped for for a long time in the direction of a real ascent of the birth-rate." What is the true meaning of that?—*A.* The idea that was

in my mind has come back again; I think it was that if this voluntary restriction has begun in one group of society, it has not expended itself yet upon the other groups of society, that it is working its way, one might almost say, as a leaven (not necessarily bad or good), and that it has not reached yet the larger groups of people, and that therefore I expect the fall in the birth-rate to go on. That is my view.

Q. Would you extend that hypothesis into your own belief? Do you take it for granted that the fall in the birth-rate is due to voluntary restrictions?—*A.* Yes; certainly.

Q. That is most important?—*A.* But again, if you ask me for proof, of course——

Q. That is our difficulty in this room, the proofs?—*A.* Yes.

Dr. Stevenson. May I turn to syphilis for a moment, and ask whether syphilis lowers the birth-rate noticeably in other ways than by causing still-births?—*A.* Well; of course, it cannot lower the birth-rate by causing still-births. If they are still-births they are not registered.

Q. The births would be registered if the fœtus did not die *in utero?*—*A.* In other words, if one could do away with syphilis, one would raise the birth-rate?

Q. No; my point is, is still-births the only way or the chief way in which syphilis operates in preventing the birth-rate being higher than it is?—*A.* Oh, well; it is very difficult to say. Of course, if a man contracts syphilis, it may increase the chances of his sterility, because I have always maintained that one could not believe that the spermatozoa—the semen—could both carry life and death at the same time. At the same time, a good many people would differ from me in that opinion.

Q. So that you think that syphilis leads to the diminution in the amount of conception?—*A.* To the potency of a man to make his wife conceive.

Q. You think, then, that syphilis may cause a considerably greater lowering of what I may call the potential birth-rate than what is expressed by the number of still-births due to syphilis?—*A.* Yes; I think so.

Q. Because you would agree, I presume, that the lowering of the birth-rate due to syphilis, still-births, is after all a trifling one. May I put it this way, that the still-birth-rate in this country is still less than 3 per cent. of live-births, and it is impossible to say how much should be deducted for still-births not due to syphilis, but if one were to attribute probably an excessive amount of still-births to syphilis, and say that 2 per cent. of what would have been live-births became still-births owing to syphilis, then the

utmost possible lowering of the birth-rate would be from what would be 25½ per 1000 to 20 per 1000?—*A.* Your figures may be all right, but the difficulty of saying anything about that is that it *is not the still-births which are increased by the syphilis;* it is the *abortions*, which, of course, do not in time come anywhere near the still-births. The abortions escape through the meshes of what I may call the registrational net; we cannot get them at present. We get the still-births, but I do not think that syphilis is so tremendously fatal in the case of still-births, for they may be due to an infection later in pregnancy.

Q. Then we get three effects of syphilis: first, the prevention of conception; secondly, the causation of abortion in the early months; and thirdly, the still-births?—*A.* Yes; I think the middle one is the important one, the causation of the abortions.

Dr. Schofield. May I ask whether the whole thing is not an absolute fallacy with regard to syphilis, that syphilis has always produced these effects ever since it has been syphilis? There is no proof that syphilis has increased, therefore there can be no proof that it has anything to do with the falling of the birth-rate?—*A.* Well, that is very subtle, but does it not come to this, that other things are at work now, and therefore this one bulks more in the results? I mean to say, if there had been no fall in the birth-rate, all my evidence here would have been produced just the same. I have been wishing to produce it for years, but the falling birth-rate has given me the opportunity of producing it. That is what I mean.

Q. Yes, sir, but you have yourself pointed out what does produce a fall in the birth-rate, because it was not operative in previous years?—*A.* Yes.

Q. Whereas syphilis was, and not any increase. If it were left alone, the birth-rate would remain the same, smaller by 5 or 6 per cent. on account of syphilis, or more than it would otherwise be, but not becoming smaller than it used to be?—*A.* I quite see.

Q. That is most important?—*A.* From the point of view of the Commission, I quite see it.

Q. As a Commission; that is it; we are here to consider what produces this fall in the birth-rate; it cannot be syphilis unless syphilis has increased as a cause. I submit that as a proposition which it is impossible to controvert?—*A.* Yes.

Q. You have given it as your opinion that the fall in the birth-rate is largely the result of voluntary artificial restriction, and you have also pointed out to us what to

some of us is new here this afternoon, that that restriction is due partly to the increased advice of medical men both with regard to producing abortion in certain cases of phthisis, and others where it is legitimate, and also in advising that children should not be born oftener than once in two years or once in three years, which I myself do now with immensely increased frequency than when I first practised. That never occurred to me when I practised first, and I am only one of 10,000 or 100,000 who are doing the same thing, therefore what you point out, that medical men themselves are the cause of the fall in the birth-rate, is an absolutely true point?—*A.* Yes; I agree.

Q. The other point is, the financial conditions are more acute than they were, and the third is that the women are more ready and less scrupulous; that is to say, the general feeling of the medical man is more in favour of the limitation of families than it used to be, and that is the cause which produces your opinion, which I may read again, that the present fall in the birth-rate is largely the result of voluntary artificial restriction, and you agree to that?—*A.* Yes.

Q. That is most important?—*A.* Yes; with this additional statement, which I would like to repeat again, that it is on that account that we have now an opportunity of studying what are the other causes of death before birth.

Q. Oh; quite so.—*A.* I have always said that if we cannot hope for a great change in the habit of restriction which is growing, then we must bring up the reserves and strengthen the recruits.

Q. There is no doubt from what you are saying, I should judge you have in your mind that if we could stop the fact of syphilis in its deadly effects, we should succeed in checking the fall of the birth-rate due to other causes?—*A.* Yes. I would like to put it this way, that I regard the fall of the birth-rate as a thing which, whatever we do and say here, will go on. What I wish to see is not necessarily the birth-rate altered and going up again, but the birth-rate improved in its quality. It is an opportunity; it is a crisis in the history of a nation when we can make use of the interest which is being taken in the subject, and say, "Now we will tell you a lot of things which will help to bring children into the world at this crisis when they are so needed."

The Bishop of Birmingham. A great many defective births are due to syphilis; the quality would be absolutely improved if syphilitic conditions did not prevail to the same extent?—*A.* Yes; and I would like just to add

that Prof. Fournier's book on Syphilis, published some years ago, seems to me, and to any one who reads it carefully, to show that a great many unsuspected connections exist between syphilis and effects, what are called parasyphilitic effects.

MONSIGNOR BROWN. When you say "voluntary restriction," I should like to ask you how far the pressure of circumstances may make what would be voluntary, compulsory, in the sense that it remains, of course, the act of a human will, but take the people who are face to face with having to clear out of their habitation if there is another child born?—*A.* I have a great sympathy with them. I think it is becoming a very trying thing for them.

Q. Do you consider that that is a factor, the housing question?—*A.* Yes, certainly in Edinburgh it seems to be a factor. The fall in the school attendances, etc., of late years seem to show that the housing question comes in.

THE BISHOP OF BIRMINGHAM. But would you say that this artificial restriction prevails more in the classes that are really poor, and under difficult housing conditions, than it does in the classes that are luxurious and have plenty?—*A.* I think it is beginning to.

Q. But it began with the other classes?—*A.* Oh, yes; I think so; that is my opinion.

Q. It is increasing in what we may call the poorer classes on account of fresh knowledge, or what they consider knowledge, gained, is it not? Chemists' shops are very different places from what they used to be, are they not?—*A.* Yes. My knowledge, of course, of them is not first-hand, but medical friends tell me that where a man has been to Edinburgh, for instance, and has returned to his native village and settled down, bringing this knowledge with him, it spreads through the village very quickly.

MONSIGNOR BROWN. But surely, are there not other causes, the compulsory clauses of the Factory Acts, for example; the restriction of child labour; where the child is no longer a producer, but a dead load upon the family, and there has been a proposal lately to raise the leaving age? Children cannot now leave school till they are fourteen. If a man is married at twenty-four, he is thirty-eight before the first child can leave school and become an earner. Do you think not that that is operating with the working-classes, and is making the struggle perfectly impossible? A number of people met and said gaily the other day, "Let us raise the school age to sixteen," in a most cheerful sort of way; but then, a man marrying at

twenty-four, and having four children with the proper intervals, and the last child is to leave school at sixteen, the man will be dismissed from his employment, as past work, on account of sight and age, before the last child goes to work?—*A.* I see the line you are thinking along; I just agree with you in thinking that it is probable.

Q. We have rather assumed that this restriction is pure "cussedness," that people say they are not to have children because they do not like them. Among the working-classes is there not an immense amount of restriction practised because the penalty of having them is so terrible?—*A.* And because the information of how not to have them is more available.

Q. That is the way to do it, of how not to have them; the methods have got better known, but the incentive to use the methods is increasing rapidly every day?—*A.* I think every sympathetic man must feel that.

Q. Very often it is generally ignored, I think?—*A.* I am quite prepared very sympathetically to admit that the pressure is greater, but I should like also to add that amongst other classes of people I think the spirit of adventure in having children has died down a bit in this matter.

Dr. Newsholme. On that point, I would like to ask you, while admitting these economical causes which lead to keeping down the number of children are operative to a greater extent than formerly, is not the main cause which has led to the reduction of the birth-rate the fact that the people now know, as they did not know formerly, how to do it?

Monsignor Brown. May I ask what evidence there is that they did not know it? Take certain methods of restriction: first, there is the Book of Genesis, and there are mechanical ones. There is evidence that at the time of the Fire of London the condom was in use; there is clear historical evidence of that. Certainly on the Continent a knowledge of all the pessaries goes back a very long way, and what evidence is there that the ordinary working man's wife, twenty years ago, if she did not want to have children, did not know how to set about it?—*A.* Well, my answer is this, that in the case of Paris there is evidence from one or more obstetricians of Parisian hospitals that within sight of the hospital gates lectures were now being given and limelight views shown of the processes, and that the instruments to prevent them were offered for sale. So I think nowadays possible parents are being told more.

Q. We were told in evidence that the ordinary very primitive method, interruption, was the main method?—*A.* The obstetrician I have referred to did not seem to think so.

Q. Nobody is to tell me that that method has only just got known to the working-classes.

DR. SCHOFIELD. Would you not go so far as to say that the cause of the present low birth-rate, being largely the result of artificial restriction, was due to an increase in the knowledge of the methods and a decrease of the moral condemnation attaching to the act? That is a very large factor in such a religious community as the people of England and Scotland?—*A.* I am not prepared to say that, because of want of knowledge again. At our discussion in Edinburgh some time ago, in connection with the birth-rate, at the Public Morals Conference, one of the speakers said, "What are doctors saying about this; what are clergymen saying about this?" and there was no answer, and I think until we get something like information as to what a doctor says, if he is asked——

Q. But doctors are condoning it; you have pointed out this afternoon with great power that medical men advise it?—*A.* Wait a moment; for medical purposes.

Q. Medical practitioners advise greater time between the births?—*A.* Oh, yes; certainly that.

Q. Also in certain cases they are more ready to produce abortion where it is necessary?—*A.* For medical purposes.

Q. It seems all to work together in the same way that the moral feeling of the nation is changing with regard to this practice, and that makes it easier, combined with the increased use?—*A.* Yes; I believe that, but my difficulty is in making any statement about it; to found my belief upon facts.

DR. NEWSHOLME. There is one example of the possibility of increase only with the last twenty-five years, and that is the greatly increased spread of literature in which that kind of information is deliberately given?—*A.* Yes.

Q. May I take it that within the last twenty-five years there has been a great increase of such literature?—*A.* Yes; my patients tell me of the receipt of it after the announcement of the birth of one of their children has appeared in the papers.

Q. That would confirm the view that knowledge of these mechanical means among the masses has increased?—*A.* Yes.

DR. SCHOFIELD. My son-in-law, who is in the Army,

told me that when his wife had a daughter, he was bombarded with literature how to get no more children. Such a thing would have been impossible many years ago.

Monsignor Brown. They get it on the announcement of marriages appearing in the papers.

The Bishop of Birmingham. That is all new.

Monsignor Brown. Some of the more up-to-date mechanical methods may be, but nothing will convince me that the cruder methods were unknown.

The Bishop of Birmingham. It has become known to the working-classes that these practices of one sort or another do prevail in other classes, and thereby they have got a certain encouragement to use these means?—*A.* Yes.

Monsignor Brown. I believe that the working-classes are coming to think that there is no penalty attaching to it of injury to health; which they did not believe at one time. The women used to teach their daughters that if there was no fertility there was a risk to health. They no longer teach them that. I think that is a very big factor?—*A.* Yes. Might I mention one or two things *ab initio?* I would just like to bring before your notice the Census of Scotland, Volume III, for it is extraordinarily important in this whole matter, as giving the occupational fertilities in Scotland, which has never been available before, and a great many other things, such as the fall of the birth-rate in groups, the size of the families between the different periods of years. I may say I am writing a short note of this, which will appear in the *British Medical Journal*, giving the significant points, I think, in the Fertility Report, and what I have said there I need not say here, but it is exceedingly interesting, especially the occupational fertility, and the fact that between 1864 and 1865, to put it in this way, if 100 women of twenty-one years of age each married at that time, the probabilities were that they had 800 children between them during the succeeding years of reproductive life, that is to say, each woman had a chance of eight children. Thirty years later, the same number of women, at the same age, marrying in Scotland only gave birth to 700 children; therefore they had an average, of course, of seven children to a marriage. That is one of the things which is brought out, and the whole of the Report besides that, I think, is exceedingly valuable. If the Commission thought it worth while, I think they might almost take some of that, paragraph by paragraph, and consider it. Then I would like also to raise the question how far the knowledge by women themselves of the dangers

of childbirth and inconveniences and discomforts of pregnancy has had an effect upon the birth-rate. It is a thing which is very, very difficult even to give an opinion about, but I would go on to the constructive part of my evidence, and say we have made labour practically painless by chloroform and other anæsthetics—that I do think that if we could devise means to make the nine months more bearable, more free from minor worries, we should be doing something in a way which any one—whatever view he held about small or large birth-rates—would not object to, because that would be making women, the best type of women, more willing to bear children. That side of it, I think, has been very little noticed, and in my Address, to which I referred before, I bring it strongly forward. Then there is a most extraordinary letter which I received about the same time as the 1910 letter which I read to you. It is from a woman, I think.

"I read your address, and felt surprised that men are still to be found who want the world to be cursed with large families.

"I laboured hard in the mission field in the name of Jesus for thirty years, thinking Jesus would save and that Drink was man's curse, but I am convinced that the curse of man is large families.

"Could I begin life again with my present knowledge, I would never rest until a law was passed making it a crime for any man to have more than one child unless he could make proper provision for them, whether both girls or both boys. Neither God nor the nation makes any provision for a man with a large family, hence it is a crime for a man to bring them into the world."

The rest of it I do not think is to the point, but she goes on to say—

"I knew a good man, the best I ever knew; at forty-two he was the father of eleven. In deep poverty, he cried to God for help for his wife and children. God laughed at him, and said (by His inaction), 'Fool; you should not have brought children into the world.' He died, starved to death; left eleven children. That is thirty-four years ago. His children said, 'We will never be such a fool as father was and have a lot of children.' Result, nearly all in business, and doing well. The ten men and women have ten children amongst them."

One simply mentions that as the kind of letter that one occasionally gets upon this subject.

The Witness withdrew.

Meeting.—February 4, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Mr. William John Berry, Assistant Housing Manager to the London County Council.

The Witness. I understand you want information upon, first, the class of accommodation provided and the scale of rents in the dwellings provided by the London County Council, and, secondly, the regulations governing the number of inhabitants in the various properties.

The accommodation provided by the Council at their various estates may be divided under three heads: tenements in block dwellings, cottages and cottage flats, and lodging-houses for single men.

The tenements comprise from one to six rooms, and mostly each contains its own scullery and water closet. Nearly all block-dwelling estates are erected in that way. The tenements in all cases contain a living-room, with one, two, three, or more bedrooms, according to the size of the tenement, and the offices mentioned. A one-room tenement would contain a living-room, with or without a recess for a bed. Some of the one-room tenements are so constructed that there is just a recess at one end, suitable for a bed; others are simply square rooms.

Dr. Saleeby. What size of bed?—*A.* A bed 6 feet 6 inches by 4 feet 6 inches. That would be the size of the recess.

The approximate sizes of the rooms are: living-room, 144 to 160 square feet—they vary very much in different localities and plans differ; the bedroom, 96 to 110 square feet; the height being 8 feet 6 inches everywhere. The total accommodation provided in block dwellings, and the rents charged, are as follows—

Rooms: 1	2	3	4	5	6
192	3,301	2,614	328	14	3
		and the weekly rents,			
2*s.* 3*d.* to 6*s.*	4*s.* 6*d.* to 8*s.* 6*d.*	6*s.* to 11*s.* 6*d.*	7*s.* to 13*s.*	10*s.* 6*d.* to 14*s.*	12*s.* 6*d.* and 13*s.* 6*d.*

The total number of rooms we have is, therefore, 6,452, and they will accommodate 32,072 persons. On March 31, 1913, the total in occupation was 23,008, and the average number of persons per room was 1·43. Although we can accommodate 32,000 under our regulations there were only 23,000 in occupation.

Monsignor Brown. Is there any analysis of the ages of the sexes of those?—*A.* I have not brought them. I can obtain the tables.

The cottage estates are next. The cottage estates provided by the Council are mainly in the suburbs of the county at four large cottage estates,[1] as follows—

	No. of cottages.	No. of persons provided for.
Totterdown Fields Estate, Tooting	1,261	8,733
White Hart Lane Estate, Tottenham	839	6,599
Norbury Estate, Croydon	472	3,472
Old Oak Estate, Hammersmith, close to Wormwood Scrubbs	110	631

A number of cottages and cottage flats have also been provided in nearer suburbs. We have a few cottages, not many, at Deptford and Greenwich. The accommodation provided is in all cases self-contained, and, with few exceptions, contains not less than three rooms, namely, a living-room and two bedrooms. Cottages containing four and five rooms are also provided, these containing a parlour, living-room, two or three bedrooms, or, in some cases, in four-room cottages, a living-room and three bedrooms. There is a scullery in all cases in addition to the living-room; we do not count that as a room. Baths are also supplied, either in a bathroom on the first floor, or a bath in or off the scullery on the ground floor. All the cottages have not baths, but a very large number have.

At the Old Oak Estate, Hammersmith, the Council have provided a few cottage flats of one and two rooms. The approximate sizes of the rooms at the cottage estates are—(1) parlour, 100 square feet; (2) living-room, 120 to 160 square feet; and (3) bedrooms, 80 to 180 square feet. In arranging an estate we endeavour to have one large bedroom, and the other rooms smaller. We think, if there is one large room, that the man and wife would occupy that with their smaller children, and the smaller rooms would be quite suitable for their grown-up children.

[1] The Council was still building at the White Hart Lane, the Norbury and the Old Oak Estates at the date the Commission was sitting.

Q. Is there any restriction upon how they use it?—*A.* Well, the only restriction, I think, is the number of individuals we allow into the house.

Q. Into the whole tenement?—*A.* Yes. The total accommodation provided in cottage estates, together with the rents, is as follows—

Rooms:	1	2	3	3 and small additional bedroom	4	5	Total.	No. of persons provided for.
	16	184	1,273	310	803	472	3,058	21,643
				Weekly rents.				
	4*s.*	4*s.* 6*d.* to 6*s.* 6*d.*	6*s.* 6*d.* to 9*s.*	8*s.* 6*d.* to 10*s.*	8*s.* 6*d.* to 11*s.*	10*s.* 6*d.* to 14*s.*	—	—

The total number of persons actually in occupation last March was 11,132, or an average of 1·01 per room. That is a smaller number per room than in the block dwellings.

The rents charged on the several estates necessarily vary. They are governed by the Council's regulations, which provide that all rents shall not exceed the rents ruling in the neighbourhood, and shall be so fixed that, after providing for all outgoings in respect of maintenance and capital charges, the dwellings shall be self-supporting. All rents become payable on Mondays in respect of the current week. The average rent per room in various parts of London is as follows—

Preston Road Estate, Poplar	2*s.* 4¼*d.*	per week
Boundary Street Estate, Bethnal Green	3*s.* 0½*d.*	,, ,,
Millbank Estate, Westminster	3*s.* 3¼*d.*	,, ,,
Webber Row Estate, Southwark	3*s.* 1¼*d.*	,, ,,
Swan Lane Dwellings, Rotherhithe	2*s.* 5¾*d.*	,, ,,
White Hart Lane Estate, Tottenham	2*s.* 3¼*d.*	,, ,,
Totterdown Fields Estate, Tooting	2*s.* 10½*d.*	,, ,

In accepting an applicant for rooms as a tenant, care is taken to see that the family will not overcrowd the tenement, and it has been laid down as a basis of calculation that the standard of two persons per room must not be exceeded by more than one child under three years of age. That is, if we have a three-room tenement in a block dwelling we should let a man and wife and four children come in.

It may happen that in course of time by natural growth

in numbers and age, and the introduction of other members of the family not previously living with the tenant, the tenement becomes overcrowded. In order to ascertain whether such is the case, an enumeration of the occupants of such tenement is taken yearly. Overcrowding is calculated on the basis of two persons a room, all children under five (instead of three as on admission) being counted as nil, and any child between the age of five and ten years as half an adult; so we may possibly have seven persons in two rooms, although two of them might be under five. Where there are too many we tell the tenant he must transfer to a larger tenement.

MONSIGNOR BROWN. At a higher rent?—*A.* At a higher rent.

Q. Have you such tenements available?—*A.* Oh, yes; we have rooms at all our Estates.

Q. Available?—*A.* We give them certain times; two, three, or six months. If we cannot transfer them they must leave. In all my experience we have never had a dozen cases where they have had to leave.

DR. STEVENSON. Might there be a family in a one-room tenement; father, mother, and several young children?—*A.* No; we never accept them.

MONSIGNOR BROWN. Could not a young married couple take a room?—*A.* Yes.

Q. And a child be born?—*A.* Yes.

MR. HOBSON. And twins might be born?—*A.* We should not disturb them for some time; several such cases occur, but they have always moved; this is done without our applying a drastic order. They could then move into a two-room tenement, because the regulation that the standard of two persons per room would not be exceeded; in fact, with three children, if one were under three, they could occupy a two-room tenement.

Q. What I am concerned in is the number of young children that might be crowded for sleeping purposes into the same room with their parents?—*A.* Yes; it is frequently, or generally, two or three small children.

Q. And it might be more; not usually, of course, but there might be cases?—*A.* I am giving you, a little further on, some particulars of the actual cases we have found.

As accommodation varying in size has been provided at all the estates, tenants are not allowed to take lodgers at the block dwelling estates, but on the cottage estates permission is given by the Council, under certain conditions, to tenants who make the request to take a lodger.

The birth-rate at the Council's dwellings for a number of years has been as follows—

Year.		No. of persons in occupation of dwellings.
1907–8	31·4 per thousand	26,687
1908–9	28·1 „ „	28,335
1909–10	27·1 „ „	31,177
1910–11	28·6 „ „	32,427
1911–12	27·5 „ „	34,221
1912–13	25·4 „ „	35,631

Dr. Saleeby. That really is a drop in the birth-rate at the Council's dwellings from 1907–8 to 1912–13—only five years—from 31·4 to 25·4?—*A.* Yes.

Q. Can you go back at all farther; could you tell us about 1897 or 1877?—*A.* I am afraid we did not keep particulars previous to that.

Q. You have nothing earlier than 1907–8?—*A.* No; not for the Council's dwellings. I account for this by the cottage estates largely; we had not many cottage estates in the earlier years, and in the block dwellings children are more plentiful than they are in the cottage estates.

Q. That is a very important answer; we must note that clearly, because this fall as it stands is amazing.

Monsignor Brown. You mean that the births are more numerous, or the children taken in with parents; there is a distinction between the two?—*A.* The class of people living in the block dwellings had more children.

Q. There was greater fertility per family?—*A.* Yes.

Dr. Saleeby. And they pay similar rents?—*A.* No, not similar rents, because the cottage rents are lower than the block dwelling rents. They are situated in the suburbs and they cost more to get at.

Monsignor Brown. There is a journey to be added to the rent?—*A.* There is.

Dr. Saleeby. These are families with a larger income in the cottages?—*A.* Not necessarily. Those who are able to go out there are able to do so on account of their work; those living in block dwellings usually have their employment near their dwelling.

Q. I want to get, if possible, at the correlation between birth-rate and income?—*A.* We have noticed that; that the birth-rate on cottage estates is less than in block dwellings.

Q. But you will not correlate that definitely with income?—*A.* No; I have no information as to that.

Dr. Stevenson. Is it possible that families go more

to the suburban cottage dwellings because they have several children already? Perhaps they might move from the block dwellings after two or three children are born; they want to get further out?—*A.* The tendency during the last few years, with improved transit, undoubtedly has been to induce people to move into the suburbs, and those that are able like to do so.

Q. So that it would follow that it would be natural for the birth-rate to be lower in the cottage dwellings where people go who have already some young children, than in the block dwellings where presumably a newly married couple would go to start?—*A.* No; I do not think I have noticed that. The people who become tenants are often newly married in both cases, but they largely consist of families in both cases.

Monsignor Brown. Of families coming in?—*A.* Of families coming in. In our block dwellings particularly we have families because a large number of landlords object to take families. If they can pick and choose their tenants they will select one that has no family. So long as they satisfy our conditions, and they do not exceed two persons per room, we provide them with rooms if we can.

Mr. Hobson. Then in all the parts of your dwellings you expect to have a larger number of children than would be the case in outside property?—*A.* Yes.

Monsignor Brown. If the tenements, the blocks, empty out into the cottages, what class of occupier takes their place? First of all, do they fill up? You say with the improved tramway service and cheap fares and the rest of it, they have been moving out into the suburbs, which means a certain discharge, as it were, from your inner blocks; would the same class of people come and fill the blocks?—*A.* Yes.

Q. Much the same class?—*A.* I cannot say that at all appreciably our tenants from the dwellings have gone into the cottage estates. I know of a few instances; that is all. But we have no difficulty at all in letting either our block dwellings or our cottages. At the present time we have less than 2 per cent. empty, taking one with the other.

The Secretary. Is there a better class of family, skilled workmen, living in the cottages?—*A.* No; we have all kinds; we have a very large percentage of unskilled labour residing in our cottages.

Mr. Gardiner. Is not the rent of the cottage higher than the rent of the tenements ordinarily?—*A.* Oh, no; the rent of the cottages would be lower per room.

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Dr. Saleeby. It is quite definitely your opinion that the birth-rate has very strikingly fallen in the last five years; it simply goes with the increasing proportion of cottages under your control?—*A.* I think so; I have not particularly analysed that.

Q. Could you show us to what extent the proportion of cottages has risen?—*A.* Yes; I could analyse it in the year 1907–8, and again last year.

Dr. Stevenson. Would it be possible to take out the birth-rate in the two classes of dwellings separately?—*A.* I think we could do that.

Monsignor Brown. In your building plans do you get very close to the minimum laid down by the Building Act, or do you get right above the minimum demanded by the Building Act?—*A.* We vary the size of the rooms. There was a time when the Council laid down a rule that no living-room should be less than 144 square feet, and no bedroom less than 96, that is floor area; 12 by 12 is 144, and 8 by 12 for the bedroom.

Dr. Saleeby. But you do build them now at 80?—*A.* In cottages; not in block dwellings. We should not do that in block dwellings, but in cottages we build some as small as 80; that is really a room for one person. If there is a grown-up son or daughter, they like to have their own room, and it is much better to give them a small room than that they should share one room half as large again with someone else.

Q. I want to get back to this fall in the birth-rate, because it is just about 20 per cent. in five years; it is a most astonishing proportion. Is it possible that you have made a higher standard as regards children in these five years, or are your Regulations the same as in 1907?—*A.* Oh, yes; the same Regulations.

Mr. Hobson. Has the age or character of the persons coming in not altered at all, as far as you can tell?—*A.* No, not that I have noticed.

The Secretary. Do you choose outside your Regulations and prefer people with smaller families and better skill?—*A.* No; whoever applies, we receive their application, and it is filed till we are able to offer them accommodation. They are taken strictly in rotation and each application is dealt with on its merits, one after the other. We have on some of our estates numbers waiting for vacancies.

Q. So that actually those who now put their names down have smaller families?—*A.* No; I do not say that at all.

Monsignor Brown. What is really wanted is the

number of children per family?—*A.* That is the application form, and you will see there the questions they have to answer. (Application Form handed in.)

Dr. Saleeby. You are to be so kind as to get out for us the birth-rate in the respective kinds of dwellings?—*A.* Yes; I will endeavour to do that for you; the birth-rate in the cottages and in the block dwellings, to see if that does account; I am not absolutely sure it does.

Q. The figures are sensational as they stand; they are astounding?—*A.* They appear to be very high.

Monsignor Brown. Could we get the number of children per family; would that help us?

Dr. Stevenson. The birth-rate would be most interesting.

Monsignor Brown. The number of births that take place within the walls; that is the birth-rate; it is merely the enumeration of the actual births that take place?—*A.* I had not quite finished what I had to tell you, that was the number of cases of overcrowding. I have told you we deal with overcrowding. I will tell you now the number of cases we have had each year for the last six years.

Year.		No. of tenements and cottages provided.
1907–8	21	7,880
1908–9	25	8,196
1909–10	23	8,539
1910–11	50	8,947
1911–12	12	9,272
1912–13	32	9,510

Q. Did that overcrowding arise, do you think, through births, newly-born births, or changes as it were in the family?—*A.* In most cases owing to the children becoming older. Children that used not to count becoming half adults, and those half adults becoming full adults.

Mr. Unsworth. If the number of children is restricted in the rooms, would it not cause the parents to restrict the number of births in those rooms in order to keep in?—*A.* Well; I should not like to say. Of course, it is known we do not allow more than two persons per room, generally speaking.

The Secretary. Is there a prevailing feeling among your tenants that you do not encourage children?—*A.* Oh, no; they all know that we do. We are often told by applicants that they have had difficulty elsewhere in obtaining rooms, and they are very glad that we will take their children.

MONSIGNOR BROWN. That is to say they meet with a blank refusal by the ordinary house agent or property owner?—*A.* Yes.

Q. At what limit do they blankly refuse them; at two or three?—*A.* Generally the age of the children is the guide.

MR. HOBSON. Do they ask a higher rent as a condition of receiving persons with children, or do they simply refuse them, or both?—*A.* Both, I think. I have no doubt in some cases they ask a higher rent.

MONSIGNOR BROWN. How do you receive such definite information?—*A.* I have received it from applicants who have been to them before coming to us. You will have great difficulty in getting any owner of property to say that he refuses them on that account, I think.

DR. SALEEBY. Your figures of birth-rate are much higher than those of the general population; it was 31·4 per thousand in 1907?—*A.* It is much above the average.

Q. But now—1912–13—it is about the same as the general population.

MR. HOBSON. How many years have most of your places been running?—*A.* Some of them nearly eighteen or nineteen years.

Q. But have many of them been available within the last ten years?—*A.* Yes.

Q. That would account for it; people with young families or just married, would go into them, and have their children there.

MONSIGNOR BROWN. Nothing but an analysis of the families as married and with children would allow us to pass any judgment on the figures, I think.

MR. HOBSON. Have the new buildings been opened within quite recent years in equal proportion to what were open ten or fifteen years ago?—*A.* I am just looking up that one point. From the year 1904 to 1908 we practically doubled the number. There was provision for 24,000 persons in 1904, and in 1908 there was provision for 44,000. That is a very large increase. Now, since 1908 to the present time there is only an increase of 11,000. There are 55,000 at the present time, so the increase was very rapid just before we had this high birth-rate.

DR. SALEEBY. It is rather a statistical fallacy, this apparent great decline?—*A.* Yes; apparently so.

MONSIGNOR BROWN. In your older dwellings do the families continue to reside on the whole, or do they only put in a few years and go?—*A.* Yes, but we find the average change of our tenants is about one-third; one-third of our

tenants move every year. That is due largely to the fact that their place of employment alters, and also to the fact that we do not select our tenants. We accept them, provided they have a clear rent-book, and we send an Inspector to visit their present home, and provided he is satisfied it is not a drunkard's home, not a very bad home, we accept them.

Q. I think a moment ago you said, "We do not select; provided they are decent people we take first come first served." Why is that a big factor in the matter of moving as against remaining permanently, as against people who do select?—*A.* A great many people who do select will ascertain whether a man is in regular employment. We do not trouble whether he is in regular employment or casual employment.

Q. He may take it for six months and then move on?—*A.* Yes.

Q. Would you say that the complaint of applicants that they cannot get in with families is general throughout the whole county area where you have dwellings, or is localized, or is very special in certain parts roughly?—*A.* Oh, I think it is general. We sometimes have to displace a tenant for disorderly conduct. If they happen to have a large family, they ask us to give them as much time as possible because they have great difficulty in getting rooms elsewhere. I have many instances such as that.

Q. Does the Council exercise any supervision as to the disposition of the family within the rooms? For instance, suppose you get a father and mother and four children, say three of them are boys and one is a girl; is there any kind of sanitary or other supervision which regulates how these people shall occupy the rooms?—*A.* As the landlord we do not.

Q. Do you do it in any other of your capacities?—*A.* The Local Authority through their Sanitary Inspectors see to that sort of thing.

Mr. Gardiner. Is that the Borough Council's work?—*A.* They can do that.

Q. And they control the question of accommodation, whether there is overcrowding?—*A.* Whether there is overcrowding, yes.

Monsignor Brown. Can they deal with the question of the separation of the sexes?—*A.* Oh, yes.

Q. Do they, as a matter of fact?—*A.* I do not think so to any extent.

Q. For instance, suppose a girl of say ten or twelve sleeps in the same room as a father and mother, or in the same

room, perhaps, as a brother?—*A.* I have heard of instances such as that; complaints have been made by neighbours, and on investigation, if such was found to be a fact, we should suggest how it might be dealt with, but it is very rare.

Dr. Fremantle. But there are by-laws that would affect that point; are there not?—*A.* No; I know of none.

Monsignor Brown. Do you know what the Borough Council practice is on that matter; I mean, when they are dealing with overcrowding, if the Regulation scale is not exceeded, say their scale, or your scale, or the Local Government Board scale; do they, as it were, to use an offensive word, pry into how the domestic arrangements are carried on?—*A.* No; I do not think so.

Mr. Gardiner. Do you not think we might take it as a positive fact that the question of accommodation governs the question of the arrangement of the rooms for the children; I mean, it would not arise if there was sufficient room, the question of the mixing?—*A.* No; certainly not; I do not think it would arise very much in any of our houses.

Monsignor Brown. There is very often one bed in that class of tenement, and they all sleep in it?—*A.* That is why we prevent lodgers. We do not allow lodgers under any circumstances in any of our block dwellings. Lodgers we look upon as a very great moral danger, because a room would be set apart for the lodger, and all the others would be huddled together.

Q. The room need not be set apart for the lodger; the lodger would sleep with the others?—*A.* Yes.

Mr. Gardiner. What becomes of the lodger in your case; do you leave him to look after himself?—*A.* We will not have lodgers in any of our block estates. On our cottage estates, under certain conditions we allow them. We find that a number of people, middle-aged people, like to have a five-roomed house. They have a bedroom they do not want to use themselves, and they like to have a young person coming from the country who wants to live with some one. We, under such conditions as that, would allow such an one to live in the house.

Dr. Saleeby. Of either sex?—*A.* Of either sex, yes; they must have a room to themselves.

Mr. Hobson. Is that increasingly common among the cottage estates houses?—*A.* I do not think we have got more than twenty in the whole of our cottage estates; they are comparatively few; but we have a special form I make them fill up giving me full information as to the lodger they propose taking, and how he shall sleep and so forth before

we give permission, so we have safeguarded that as much as possible.

Dr. Saleeby. The Council has no provision for single women; you have no housing arrangements?—*A.* No; we have not any for the women's accommodation at present. Single men we deal with in our lodging-houses.

Principal Garvie. Could you tell me when a family grows up, the numbers increasing and so on, is it a general practice for the elder sons and daughters to go out into lodgings away from the home, so that the same home may be kept for the young?—*A.* They very rarely go into lodgings; they may go away to work or into service, but I know very few instances where they are not living at home, but living separately in lodgings. We have had a few cases where the family has become overcrowded.

Q. That is what I mean.—*A.* Where the family has become overcrowded, we have asked them to abate the overcrowding by taking a larger house, and the reply we have received has been, "No; my son is going away," or, "He will be married next June." We wait, if it is within a reasonable time, to allow of that removal to abate the overcrowding.

Q. That is just what I wanted to get at; what means are taken to meet the difficulty?—*A.* Yes; that is often done; the elder children leave home.

Monsignor Brown. Next to yourselves, who are the largest providers of housing accommodation of the tenement class?—*A.* The Artisans' Dwellings would be the next largest, I should think.

Q. Where would the Guinness people come?—*A.* Not so many as the Artisans' Dwellings.

Q. And the Peabody?—*A.* Still less, I think, and the Borough Councils have scarcely any.

Dr. Saleeby. Generally your birth-rate would be higher than that in any of these other dwellings?—*A.* I do not know.

Q. Compared with Guinness?—*A.* I should say their birth-rate would be higher.

Mr. Gardiner. Is there any objection raised in any of the other cases to families; in the case of these tenements in block dwellings, do you know any difficulty such as is raised in the case of the general property?—*A.* A Company that ran block dwellings or an artisan estate for the sake of their dividend would raise all these difficulties; they would not accept a tenant with a large family.

Q. The industrial people would do that?—*A.* Yes.

Q. But not the Guinness or the Peabody?—*A.* I do not think the Guinness or the Peabody would to any extent.

Monsignor Brown. The Guinness have got much the same Regulations as yours?—*A.* Yes.

Dr. Saleeby. Are you still building?—*A.* Building cottages rapidly; we have to erect a lot on our Old Oak Estate; we shall put up some 800 cottages there shortly.

Q. Are you adopting any conscious policy of making any provision for larger families?—*A.* The demands are for three and four-roomed houses. We provide a certain number of five-roomed houses, but if we put up too many we cannot let them.

Q. I should like to know whether it is really the case that because there is no accommodation, people are lowering their families, or whether people are lowering the numbers of their families, and accordingly you do not provide for the larger families; which is the cause and which is the effect?—*A.* Public enterprise cannot provide three or four-roomed houses; the result is people have to occupy parts of houses. There is a large number of families in London occupying two and three rooms in parts of houses because they can get no small houses. We, as a Public Authority, are not wanting to make a profit, but to succeed in providing three and four-roomed houses, consequently there is a great demand for them. People much prefer a house to themselves, with a little garden, than three or four rooms taken in a big house.

Mr. Hobson. That does not seem to apply equally to your block dwellings, because half of those are two rooms, and two and three rooms seem to cover the great bulk of the block dwellings?—*A.* Block dwellings are, as a rule, situated in a locality where there are no cottages and where there are none but block dwellings, and it is rather an extraordinary thing, we have tried to think whether the demand is for two or three rooms in block dwellings on several occasions, but it does vary so much. One year you may find the whole demand is for three rooms, another year it is for two; it varies very considerably, but generally speaking, there is more demand for two rooms in block dwellings than three.

Monsignor Brown. By young couples, where children are still being born?—*A.* Yes.

Dr. Saleeby. It is stated in Paris that they are now engaged upon an immense, most expensive building scheme. They are removing the fortifications ring and boulevards, and they are erecting at the public expense an immense number of buildings, and the idea there is that Paris, at the

moment, does not contain accommodation adequate for large families, and that the large families are there and wanting accommodation, and these buildings are going to be all put up, or practically all put up, for large families?—*A.* Yes.

Q. You do not consider that here there is that demand for the accommodation for large families? It would not be worth doing. If you were to do it here they would not be filled?—*A.* I do not know, but they cannot pay for them.

Mr. Hobson. The Paris scheme is to be subsidized enormously?—*A.* Oh, yes; it must be.

Monsignor Brown. Suppose you were to subsidize a scheme here; are there a number of families who would take advantage of it?—*A.* Oh, undoubtedly.

Mr. Gardiner. I suppose practically every family in a two-roomed house would desire a three-roomed house, if they could afford it?—*A.* Yes.

Monsignor Brown. There are very few people of the working classes want to have more rooms than they can fill; they do not like to have three rooms if they cannot fill them. To get down to the unskilled classes, the labouring class, the waterside accommodation; if they could get the same type of accommodation they would fill them?—*A.* I should not like to commit myself to that.

Q. Such families do exist; they are packed into all kinds of old houses in many of those neighbourhoods. In Rotherhithe you will find very large families; the Education Department could give you statistics of that there; quite large families, but they cannot come into what you offer because of the terms. I am not blaming you. You enforce conditions that would not be enforced elsewhere?—*A.* Yes; we do.

Monsignor Brown. Do the Guinness Trust come nearest to this Paris scheme?—*A.* They are able to supply rooms of a much lower rent than any one else. I dare say their average rent is not more than 2*s.* 4*d.*, perhaps, per room as compared with us at 3*s.* The Peabody and Guinness are much cheaper than us.

Q. I thought the Peabody was a shade higher than the Guinness?—*A.* I cannot tell you exactly, but they would be lower.

Q. Can you give us any information as to where we would be likely to get the sort of evidence that you alluded to of the private owner or the agent of the private owner refusing families?—*A.* I think you would only get that from

families that had been refused; I do not think any owner or agent would volunteer it.

Q. There is an immense amount of property in London, just fours and fives and so on, held by small private owners?—*A.* Yes; and it is those small private owners more than the larger ones, I think, that would object to the children. They are living practically on what rents they can get from the four or five houses.

Q. Therefore they keep it up to the highest point?—*A.* They keep it up to the highest point, and they want to save spending as much as possible in repairs.

Q. And also some people are willing to give something more where there are no children, other tenants, I mean, because of the immunity from noise and all the rest of it?—*A.* Yes; I think so.

Q. It is your fixed opinion that the child is not wanted, on the whole, by the property owner?—*A.* That is a very general question, and I should not like to be committed to an answer.

Mr. Gardiner. He does not want the child in his house; at all events you might put it in that way?—*A.* I think most owners would rather not accept a large family as tenants if they could get a family with fewer children or no children.

Dr. Saleeby. There is a constant problem in London for the large family; is there not?—*A.* Oh, there is, undoubtedly.

Q. There is a demand, then?—*A.* There is a demand for accommodation for large families.

Q. A substantial and important demand?

Monsignor Brown. Do you think it becomes acute, once a family exceeds four?—*A.* Yes; I should think so; if the family consist of four or five children they would have a difficulty in obtaining accommodation.

Q. A printer told me the other day about a maisonette; he had five children; when he went to an agent to rent the house the agent bowed him out, and would not listen to him, though he wanted five rooms and was prepared to pay the rent?—*A.* There is my statement.

Dr. Saleeby. Nevertheless, your Council at present is not attempting to meet that particular need?—*A.* Yes; we build five-roomed houses, but we are obliged to let them at their commercial value. They are lower per room; the rent per room of a five-roomed house is less than the rent per room of a three-roomed house.

Q. Are you increasing the proportion of five-roomed

houses?—*A.* No; we cannot let them. On our White Hart Lane Estate we built first of all two-, three- and four-roomed houses, with a number of five-roomed houses. The result was our five-roomed cottages remained empty for a considerable time. I was getting alarmed whether we should ever let them. We have overtaken that by providing a larger number of three- or four-roomed cottages, and not building five-roomed cottages, with the result that the five-roomed cottages are let.

Mr. Hobson. What is the accommodation in the five-roomed house?—*A.* Three bedrooms and a parlour, they can make that a bedroom if they like, with a living-room and a scullery.

Dr. Saleeby. 15*s.* a week?—*A.* 12*s.*; 11*s.* 6*d.*

The Secretary. Including all rates?—*A.* Yes.

Monsignor Brown. Dr. Saleeby and I went round to see, in Kennington, the Duchy of Cornwall's new property the other day. Take a concrete case. A family; father and mother and four children, and three of these are girls ranging from eight to fourteen, and there is a boy of sixteen, what would be the disposition of those children when they settled down for the night? You have got such a problem of three girls, from eight to fourteen, and you have a boy of sixteen. Do you suppose the average family will set that boy up in a room all to himself?—*A.* It all depends what accommodation they have at their disposal.

Q. Say they take a kitchen, one living-room and a bedroom?—*A.* In a block dwelling we often find a boy sleeping in the living-room on the sofa.

Q. Or say they have a kitchen, one living-room, and two bedrooms. From what we were told we supposed that the boy slept in the same room as one of the sisters?—*A.* Yes; the three girls would probably sleep in one room.

Q. You have overcrowding at once in the small room; they cannot breathe. Many of these rooms had no fireplace, no ventilating shaft?—*A.* A child of eight, of course, might sleep in the parents' room, if there was sufficient room for it, on a separate bed, and that frequently happens.

Q. Would you advocate that?—*A.* Curtain off a child of eight; they probably would. A case of that kind would be overcrowding, of course, with us.

Q. Therefore that type of family goes out from you?—*A.* Yes.

Q. That is where the pressure comes.

Mr. Gardiner. You do not shut out the parents with the family directly, but your regulations shut them out

very effectually afterwards?—*A.* Yes; but a number of years they can stay, and we do what we can for them, giving them larger rooms.

Mr. Hobson. They can stay there while there is a considerable proportion of very young children?—*A.* Yes; which they appreciate very much. There is the difficulty of the dwellings.

Monsignor Brown. The problem becomes more acute as the children advance in age; the whole disposition of the sleeping arrangements.

Mr. Gardiner. You say you do not allow lodgers in your block dwellings; do you allow different families to arrange the accommodation for their children? Assuming that in one tenement there was room for an additional child, would you allow a child from the next tenement to come down?—*A.* Generally speaking, no, but one instance I can recall. Some years ago there was a case of overcrowding; the tenant did not want to leave the locality, and they had a great friend living one or two doors away in the same block, who had a spare room which practically he did not require. I did in that case allow this child—a big boy it was—to sleep there. He lived with his own family, but he slept at the other house. It was not really a lodger at all; it was a friend obliging another.

Principal Garvie. But if the difficulty arises from the family growing older, they should be bringing more income into their household; the elder ones would be earning; that family should be in a position to pay a little more rent and go into a bigger house?—*A.* That is what we find. The children become fourteen, fifteen, or sixteen; they are earning something, and the parents feel at once they may take larger rooms. That is often done. A number of our applicants come because the children are getting bigger; they want extra rooms. We have many hundred transfers a year from one tenement to another; there is a tremendous lot of tenants transferring from one set of rooms to another simply to have an extra room.

Q. You do not think a family would stick to a smaller house just by a kind of prejudice in favour of a smaller house, if they were in a position to pay the rent of a larger?—*A.* I do not think so.

Q. I am speaking of my experience of Glasgow. I think there is a prejudice among working-class families in Glasgow for small houses. When the economical condition would allow of a far larger house, they would still cling to a smaller house. I was wondering whether that operated in London?

—*A.* No; the tendency is to ask for an additional room. On some of our estates, such as Swan Lane, Rotherhithe, and also Poplar, we had a number of three-room tenements. We could not let them; there was no demand for three rooms, but we had a fair demand for two rooms. We closed up one room and let two rooms of the three. After a time we found that the tenants had settled down there, and they thought they would like to have the additional room, so they have in time taken the additional room, within a comparatively short time, because we have only done this over twelve months. The number who first took two rooms have now taken the three, so they are desirous of getting more room if they can see their way to do it.

Q. There is a raising of the standard; the ambitions of the working-classes are rather rising in the direction of house room?—*A.* Oh, yes.

Dr. Saleeby. Do they do it partly as we do, on account of show?—*A.* Oh; I do not think so. I think they find it far more convenient to have the larger accommodation.

Chairman. I am sure we are most grateful to you.

The Secretary. Would any of the Commission like to visit any of the estates? The Witness very kindly offers you facilities.—*A.* You can visit the lodging-houses or any of the block dwellings. We would arrange to be there at any time, if you would let me know.

Dr. Saleeby. Can you tell us about the death-rate; the infant mortality; the mortality of children in your dwellings, because that is just as important?—*A.* We have no separate statistics; we get our information from the Registrar, and we check it ourselves.

The Witness withdrew.

Meeting.—February 18, 1913.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. James C. Dunlop, M.D., Superintendent, Statistical Department, General Registry Office of Births, Deaths and Marriages, Scotland.

Chairman. Shall I ask Dr. Dunlop to make his statement?—*A.* The first point I wish to take up is to establish the fact that there has been a great fall in the birth-rate in

Scotland. To show it, I have prepared a table which, using Quinquennial rates, shows that the birth-rate in the earliest years of registration, 1855 to 1859, amounted to 33·8 per 1000 of the population, and it increased up to 35·11 in the period 1865 to 1869. Since then it has steadily diminished, and in the period 1910 to 1913—that is only four years in place of five in the other periods—it fell to 25·8; from 33·8 to 25·8. The actual decline from the maximum, being a fall of 9·31, or 27 per cent; the birth-rate has fallen 27 per cent. during those fifty years.

The general birth-rate is dependent, of course, upon two factors, one the legitimate birth-rate, and the other the illegitimate. Dividing our birth-rate into the legitimate and the illegitimate, we find that the illegitimate birth-rate has fallen from 3·48 to 1·87, while the legitimate birth-rate has fallen from a maximum of 32·07 (1875 to 1879) down to 23·93. The legitimate birth-rate has fallen 8·14 per 1000, or 25 per cent.; the illegitimate birth-rate has fallen by 1·61, or 46 per cent. The fall of the illegitimate birth-rate is relatively larger than that of the legitimate, but as a matter of fact it only accounts for roughly one-ninth of the fall of the general birth-rate, the illegitimate birth-rate being much the smaller factor.

The first conclusion, then, is that the fall of the general birth-rate is very much more dependent upon the fall of the legitimate birth-rate than upon the evenly proportionally higher fall there has been in the illegitimate birth-rate.

The next point is the influence of the age at marriage on the legitimate birth-rate, and for them we turn to our Census Returns. The fertility study of the Scottish Census has been published (Vol. III, Census Report). While it is unnecessary to go into all the figures, I should like to draw your attention to one calculated correlation of applying a statistical method to ascertain the influence of the two principal factors, the age of the wife at marriage and the age of the husband at marriage. I will omit altogether the duration of marriage, because I am basing this statement upon the fertilities of marriages in which the fertile period of the woman's life has been completed; in which the wife has during marriage attained age forty-five.

By applying the ordinary statistical method, we find that the probable number of children in the family is reduced by one-third of a child for each additional year of the wife's age at marriage, while it is only reduced roughly by one-fortieth of a child for each additional year of the husband's age at marriage. The age of the husband at marriage *per se*

has very little influence upon the number of children, while the age of the wife at marriage has a preponderating influence. I know these figures I am giving you are open to a certain technical question, but they may be taken as a very fair approximation of the probability.

Q. From what age does that begin?—*A.* It is calculated from age fifteen at marriage.

Dr. Schofield. From fifteen of the wife?—*A.* Fifteen.

Q. Of the husband up to any age?—*A.* Oh, yes.

Q. Eighty?—*A.* At eighty a woman is past the child-bearing period.

Q. A man at eighty?—*A.* A man of eighty marrying a wife of twenty, you get beyond the region of statistics, and into the region of absurdities. It works out fairly close if you take a man of fifty marrying a woman of thirty, or a man of thirty marrying a woman of twenty; the sum total of it.

The point I want to bring out is that in studying the fertility of marriage it is not necessary to pay much attention to the man's age, but to concentrate upon the woman's age. That was the point that I wanted established.

Now, is this fall in the Scottish birth-rate due to increased age of the wife at the time of marriage, for we quite well know there is some increase? I think it is a little over one year in the average. I have examined this by the method devised by Dr. Stevenson and Dr. Newsholme, that is of applying a standard birth-rate to the population of the different periods, according to the age distribution, such a calculation completely allowing for altered populations. If there are more married women now than formerly, that is allowed for. If the married women are older than formerly, that is allowed for, and we get a comparable series of figures. All these figures I include in the table which shows clearly that the fall of the birth-rate is not due to any alteration in the age distribution of the married female population. The registered births equal the expected births up to 1880–1884. But since 1884 this ratio has fallen rapidly, and now the registered only amount to 81 per cent. of the expected births calculated in this manner, showing a fall of 19 per cent., which you see agrees fairly closely with our observed fall in the legitimate birth-rate, and the conclusion from that is that the fall of the legitimate birth-rate is not due in the main to a smaller number of married women, nor to any alteration in the age distribution of the married female population, but must be due to some other and outside cause.

Q. Tell us the average age in Scotland of women's marriage?—*A.* Twenty-five.

Q. Twenty-five, rising to twenty-six?—*A.* I would not like to commit myself too closely on that. I hold we have excluded the illegitimate birth-rate as accounting for the drop, we have excluded the alteration of age of the married population, and therefore we are reduced to the conclusion that this fall in the birth-rate is due to some other cause.

The only other point I would like to mention in this statement is the fact that the occupational fertilities have been stated in the Census Report, and the lower occupations are found to have comparatively high fertilities, while the higher occupations, the more intellectual occupations, have low fertilities. The professional classes, Law, the Church, Medicine, all have low fertilities, while miners, crofters, agricultural labourers, general labourers and such like have high fertilities.

Dr. Saleeby. How do these compare?—*A.* I can give you the figures if you like. As matter of fact all these figures have to be accepted with caution, being based on small numbers, and I have applied the test of weighting all the observations with three times the probable error, three times the sampling error, and only accepting them as different from the mean when that difference exceeds three times the probable error. Physicians are found to have an average family of 3·91; the legal profession, 3·92; schoolmasters, 4·25; ministers and clergymen, 4·33; all four bring significantly less than the mean.

Dr. Stevenson. What was the average for Scotland?—*A.* The average for Scotland is 5·82 of this particular group of marriages. On the other hand, crofters have got 7·04; coal-miners, 7·01; coal-heavers, coal-porters, etc., 6·61; agricultural labourers, 6·42. They are all here.

The Secretary. The miners are the largest?—*A.* Crofters have the largest average, and below crofters come coal-miners.

Monsignor Brown. In the professional classes there would be no account taken of what the woman was; whether she was engaged in some profession as well; that would not enter into the calculation?—*A.* No, that would not enter in, that is so exceptional.

Dr. Saleeby. Can you tell us anything about the comparative survival of these children?—*A.* I can tell you about the survival of children of unoccupied married women, and of occupied married women. The averages are such very mixed quantities. You take marriages of two years'

duration, of five years' duration, of ten years' duration, of fifty years' duration, and put them all into a pot, and you find there are so many living children, and so many dead children recorded. It does not follow that those children died as infants; they may have been killed in the South African War. It is such a mixed quantity that I do not attempt to make very much of it. But the effect of working mothers upon child mortality I took out.

Dr. Schofield. Do we understand you to mean the rate was 5·8 where the women were married at ages twenty-three to twenty-seven and remained married until the end of the fertile period?—*A.* I would like to draw your attention to a diagram which shows diagrammatically the fall of fertility in connection with the calendar year of marriage. We took women selected, the records of women marrying at all ages, but we studied each age separately and tabulated them according to the year in which they were married, using only those who had been married throughout the entire fertile period, and you will notice that the complete family of a woman, no matter what age you take her, shows invariably a drop. These cannot be completed, for the women subsequently married have not completed the fertile period. But take this line: it begins with an average of seven and a half in this case, and it falls down to six and a half there. Each of these curves shows they tumble down, and those falls very generally correspond to the figures I have given you as regards the fall of the birth-rate generally.

Sir John Macdonell. Do your figures throw any light upon the relative fertility of the urban population and the rural population?—*A.* None; they were only concentrated in that one big issue, marriage in general.

Q. You cannot tell, in the fifty years in which you say there has been a fall of 27 per cent. what has been the increase in the urban population roughly?—*A.* I *could* tell you that, but one cannot quite carry these figures in one's head.

Q. No, but roughly?—*A.* The town population in Scotland has gone up enormously within the last thirty years; and the rural population generally has gone down. Then I might add to that there has been an enormous migration between town and country, and a tremendous loss in Scotland from foreign migration. The migration figures affect us enormously. I was rather surprised, when doing the Census results, to find that Lanarkshire, our biggest and most populous county, with an increasing population, has lost 100,000 by migration during the decade.

MONSIGNOR BROWN. Out of the country or out of the county?—*A.* Out of the county. Migration figures affect that too a great deal.

Q. Have you any particulars of the average age of the emigrant?—*A.* Oh, no; no particulars.

DR. GREENWOOD. I should like, Dr. Dunlop, to ask you one or two questions. First of all, you refer in your précis to the decline being more marked in the urban than in the rural districts of Scotland?—*A.* The figures of the six principal towns show a bigger drop than those applicable to all Scotland. I make out, working on a slight adjustment, that the drop is 20 per cent. in Scotland, but it will be more than 20 per cent. inside the towns.

CHAIRMAN. You mentioned 27 per cent. by the other method of calculation?—*A.* Twenty-seven per cent. is the fall of the general birth-rate as observed.

Q. And 19; why do they not correspond rather more nearly?—*A.* There has been an increased age at marriage; there has been a delay of marriage. I cannot answer as to the relative number of married women, I have not got the figure at hand, but when one adjusts the rate for the present age of the women and for the number of married women——

Q. The restricted birth-rate takes that into account?—*A.* It takes into account all those factors.

DR. SCHOFIELD. It shows a difference of 19 to 21, the increased age of marriage?—*A.* The increased age and the diminished numbers of marriage.

Q. It is an enormous difference?—*A.* You must allow a little latitude for rough methods.

CHAIRMAN. The 19 per cent. would represent practically all that cannot be accounted for by changes of that kind?—*A.* Yes; I think you might take it in round quantities this way. The whole drop is 27 per cent.; of that one-ninth, or 3, is due to the fall of the illegitimate birth-rate, and in round quantities 20 is the amount due to other causes that we do not talk about, and the difference between 24 and 20 may be due to an altered married population.

DR. GREENWOOD. I should like to ask you some questions as to the occupational comparisons. Practically, I think you would say that it is entirely unreasonable to suppose that there can be so marked a difference in germinal constitution between different occupations as to account for falls from 7 down to 3·7?—*A.* Oh, absolutely so.

Q. That must be excluded?—*A.* Oh, I think so, in reason.

Q. The only question is whether there is any possibility, so to speak, of statistical heterogeneity. I should like to

ask one or two questions on that point. Owing to the size of your population being limited, as you point out in the introduction, you have had to group wives from twenty-two to twenty-seven?—*A.* Yes.

Q. In view of the fact that the average age at marriage is greater in the higher social classes, do you think that that would mean that the mean age of marriage of the wife in the samples relating to the professional classes would probably be higher than the mean age of wife in the sample relating to the working classes?—*A.* Oh, I think we may take it that that is so, and it does introduce a fallacy.

Q. You have not any idea, roughly speaking, as to what the actual difference between the means may be?—*A.* No, I did not work it out.

Q. Because, for example, supposing it were a difference of a year, that would, at the outside on the average accounts, be a difference practically of one-third of a child, we may say?—*A.* One-third, yes, much less than the observed age.

Q. That is a point, I take it, that we should bear in mind?—*A.* Quite.

Q. Then there is another point as to whether in some of the occupations we may not have introduced selection. For example, in the case of the medical profession the section of the profession which marry early is a different section from that which marries late, is it not?—*A.* I think the consultants are men of delayed marriage.

Q. Well, I mean simply as a matter of commercial necessity, a man going into general practice would marry earlier?—*A.* Yes, but they are all more or less of the same stock. I think if we carried the analysis much farther we would rather mask the main issue, would we not?

Q. The only point I am getting at is, there may be a certain amount of heterogeneity which makes comparison of samples a little difficult?—*A.* Let us assume that the general practitioner marries at twenty-six or twenty-eight, and the consultant at thirty-four or thirty-five; we are dealing here with the wives' ages, not with the husbands' ages.

Monsignor Brown. Where do you fix the point of "late"?—*A.* I take the average age at marriage as twenty-five.

Q. Above that is late?—*A.* I took that as a middle year, and I took two years on each side of it.

Dr. Greenwood. I take it it is in your opinion entirely impossible for us as statisticians really to draw any deductions as to the variations within these occupations, as to

how far in one occupation or another the variations can be attributed to artificial causes. That is purely a matter of speculation?—*A.* Purely speculation.

Sir John Macdonell. When was compulsory registration first established in Scotland?—*A.* In 1855.

Dr. Saleeby. With reference to that fall in the illegitimate birth-rate, can you help us to form an opinion as to its cause? Would you think it suggested volition; the illegitimate child being even less wanted?—*A.* I hope we are better behaved in Scotland than we used to be.

Q. You do attribute it to a diminution of extra-conjugal relations?—*A.* I think so.

Q. It is an extraordinarily high figure that you have to account for?—*A.* In certain counties it is very high indeed, and in others it is moderate. It runs up to 12 or 13 per cent. in some counties still.

Chairman. In those cases the parties are often married afterwards?—*A.* Oh, frequently, and then the children become legitimate in Scotland.

The Secretary. And you are not counting them?—*A.* We are counting all what they were at the time of birth.

Q. Making it possible to legitimate afterwards would tend rather to raise the illegitimate birth-rate, would it not?—*A.* I doubt if either party takes these things into consideration.

Dr. Saleeby. But even though you have that law, the illegitimate birth-rate has fallen?—*A.* The figure per 100 births was 10·27 per cent. in 1866, that is the highest, and from that year it has fallen steadily. It came below 9 per cent. in 1874, below 8 per cent. in 1889, below 7 per cent. in 1898, and it has again risen slightly, and for last year, that is 1913, it is 7·08 per cent.

Chairman. What is the illegitimate rate in England?—*A.* It is a little over 4.

Dr. Saleeby. And your view is that the fall is mainly due to diminution of extra-conjugal relations?—*A.* Oh, I think so.

Q. Not to increasing use of methods for preventing birth?—*A.* It is a purely speculative opinion.

Dr. Greenwood. There is just one other question I might ask you. I think you have looked into the evidence given before us by Dr. Drysdale?—*A.* Yes.

Q. I do not know whether you could give us any views on that?—*A.* Dr. Ballantyne showed me that evidence, and I expressed an opinion to him that I believe he rather wants me to pass on to the Commission. I do not offer an opinion

about the ethics of the eugenic theories, or about any other great theories in the paper, but limit myself to a statement of Dr. Drysdale that the increase of population is not correlated to the birth-rate. It is the most extraordinary statistical statement I ever heard an educated man put forward.

Dr. Stevenson. Dr. Drysdale is dealing with international comparisons in the reference?—*A.* I have taken some of these figures—I will not say they are the same—but these are figures taken from the English Registrar-General's Report of different birth-rates, and I have made a small list here of the countries in order of the rate of natural increase, putting the country of the largest natural increase at the top, and the country of the smallest natural increase at the foot. My first little list contains the six divisions of Australia: Tasmania, Western Australia, Queensland, New South Wales, South Australia and Victoria. These are arranged in order of natural increase, and the natural increases vary from 19 per 1000 in Tasmania to 13·4 in Victoria. The top three of the higher natural increase have a birth-rate of 28 per 1000, the three lower have one of 25·4 per 1000, showing a strong correlation between the high birth-rate and the high natural increase. The death-rates in the two divisions are identical, or practically so, the one being 9·9 and the other 10·0. I have done the same with European countries, such as may be reasonably compared with our own. There is no use comparing Spain or Italy, with their hot summers, and Russia, with goodness-knows-what climates, along with France and Germany; they are quite different things. I have made a list here of twelve: Holland, Denmark, Prussia, Finland, Germany, Norway, Sweden, Belgium, Switzerland, (2) United Kingdom and France. The top six of them have an average birth-rate of 30·5, and the average of the natural increase is 14·8. In the lower six the average of the birth-rates is 24·5—five less, and the average natural increase is 9·6—again five less. To my mind it is a very clear proof that there is not only a correlation, but a very high correlation, between the birth-rate and the natural increase of a nation, and it only stands to reason that this should be so.

Dr. Saleeby. Assuming that the death-rates are similar?—*A.* The death-rates are here, and they are tabulated; they have got nothing to do with it, or practically nothing to do with it.

Q. I want to return to the question about the comparative survival. Take the case of the doctors with an

average of 3·9, and the coal-miners with their average of 7; we should fall into a very grave error if we did not take into account the question of the survival of children in those two kinds of families?—*A.* Quite.

Q. We should be apt to draw extraordinarily erroneous quasi-eugenic conclusions if we merely say the coal-miner has a family of seven and the doctor a family of a little under four?—*A.* I was studying fertility of marriage here, not death-rate.

Q. I quite understand, only part of the inquiry this Commission has before it is to consider the possible eugenic or racial effect of this fall in the birth-rate; therefore I am suggesting it would be very disastrous if we concluded merely on figures like those. The infant mortality among coal-miners in Scotland, I presume, is high?—*A.* It has never been separated.

Q. It is very high in coal-mining counties in England, Northumberland and South Wales?—*A.* Yes.

Q. It is high in England; therefore the high coal-miner's family as compared with a low doctor's family would be misleading. I should imagine the infant mortality among doctors was very small. It is one-fourth among the coal-miners in England.

Dr. Schofield. It is the number of children born, not the average number of children in the family?—*A.* The number of children born in the family.

Q. But not the average number born in the two families, because the death-rate would come in there.

Dr. Saleeby. This is the number of births?—*A.* Yes.

Q. This does not tell us anything about survival, even taking the one year?—*A.* Oh, nothing; and the Census returns did not do that.

Q. It matters very much eugenically, racially.

Dr. Schofield. Oh, yes, but not to our friend.

Monsignor Brown. Have you the percentage of childless marriages to the whole?—*A.* Yes; 11 per cent. of all, I think.

Sir John Macdonell. Is that percentage increasing?—*A.* I cannot tell you; this is the first calculation upon it. The only use I made of the question, living versus dead children, in the Census, was making a comparison between the families of mothers who are working and those who are not working; 24 per cent. of the children of mothers who are working were dead and 76 per cent. living, while among mothers without remunerative occupation only 14·8 per cent. were dead and 85·2 per cent. living, *e. g.* 24 per cent.

dead when the mother has remunerative occupation, and 14·8 per cent. when the mother has not.

Dr. Saleeby. Your figures, 14 and 24, were not comparing Dundee with Dundee, so to say?—*A.* Oh, no; it is all inside Scotland.

Q. It is scarcely comparable with Dr. Karl Pearson's inquiry in Birmingham, then, where Birmingham was compared with itself in respect of the occupation or the non-occupation of the mothers?—*A.* No; it is on quite different lines; it is quite a different experiment; a separate observation.

Q. Of less validity, then?—*A.* Well, I do not know; personal opinion comes in there.

Dr. Schofield. Would you say that the age at which children can earn money for their parents has a direct effect upon birth-rate?—*A.* I can guess at it.

Monsignor Brown. Might I supplement that? If you raised the compulsory school age very much more, do you think that would be an incentive to voluntary restriction?—*A.* I clearly think so.

Dr. Schofield. And are there restricted facilities in Scotland for housing people with families as against those without families?—*A.* I do not think so; I never heard of such a restriction, but in Scotland a system has grown up within the last few years of ticketing houses.

Monsignor Brown. Sanitary limits?—*A.* Yes; the houses are ticked off to accommodate four, five, three or two according to their size, and the smaller the house the cheaper it is, consequently the more children there are they have to look out for a bigger house and pay more money.

Dr. Saleeby. Who tickets the houses?—*A.* The sanitary inspector.

Monsignor Brown. They go round and make nocturnal visitations?—*A.* Yes, and prosecute too.

Dr. Stevenson. Do the Scotch figures disclose any tendency either to increase or decrease in the rate of fall in the birth-rate; is the rapidity of fall about constant, or is it on the increase or decrease?—*A.* The last two years the fall has been checked; 1913 and 1912 were both greater than 1911. Then we have had a high marriage rate for two years now.

Dr. Saleeby. The actual birth-rate was higher?—*A.* The last two years it was higher than before, but there has been a higher marriage rate.

Dr. Stevenson. To put the matter in another way;

do you think there is any possibility or appreciable probability of a stationary position being reached, as apparently has been reached in Australasia, touching bottom, and then a tendency to rebound?—*A.* It does not look like it; we have not got down to that level. We have to fall to the extent of France or Ireland before we get to that.

Dr. Schofield. May I ask another unanswerable question? Do you gather, from knowing the statisticians of Scotland, whether there is a general opinion that the cause of this fall which you observe is due to artificial restriction?—*A.* I think that is the general opinion.

Q. That is worth something, as coming from a body of statisticians.

Monsignor Brown. Do you think, unofficially, it is on the part of both parents, or on the part of the woman mainly or the man mainly?—*A.* That I cannot say.

Dr. Greenwood. I think you say that the fall in the birth-rate began before, or actually was beginning before, even 1870; your maximum is 1865 to 1869, is it not?—*A.* Yes; that maximum is a period of actual years; 1876, in my recollection, had the highest rate of all, but the oscillations were very small up to that point.

Dr. Stevenson. Do you connect the commencement of the fall with any particular event? I mean, anything which would increase knowledge of methods of prevention, such as the Bradlaugh litigation, from which the fall in England dates its commencement?—*A.* The two things merely happened at the one time; I do not know to what extent they are connected with each other.

Dr. Saleeby. Would it be possible for your figures to show us any influence of factory legislation upon birth-rate by comparing the areas of Scotland to which the factory legislation applies, and those to which it applies less? Can you give us anything comparable to the work Professor Pearson has done in England?—*A.* I should think so; I should think I could do that. There is very little influence of the Factory legislation in some of the Highland counties, some of the purely agricultural counties, Berwickshire, Wigtownshire, Sutherland, Caithness. I should compare the changes there with what they have been in, say, Lanark.

Chairman. We are very grateful to you for coming.

The Witness withdrew.

Meeting.—March 4, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Mrs. Burgwin.

The Secretary. Mrs. Burgwin has been unable to send us a statement in advance in writing; but I have suggested that perhaps she might like to make a verbal statement in the first place.—*A.* I think Mr. Marchant has just explained the position I take up, because I felt that I could be as useful if I came here and told you what I know from working amongst the poor, and also from my knowledge of a good many of the middle class. Of course, from my point of view this birth-rate question is no new thing. We are simply reaping as we have sown; that is really what it means. The Knowlton pamphlet, published by Mr. Bradlaugh, showed how conception could be avoided by married people, and created a certain amount of knowledge, a certain amount of feeling, but it did not, I think, raise any great public protest except that that book was prohibited after some time. But that was followed by an idea amongst people in general that children were "incumbrances." Even in our religious papers you often saw advertisements, "Wanted, gardener and his wife, without incumbrances." All that sort of thing created an opinion, as it were, that you had no right to have a large family. It is all that kind of thing which has produced the present result.

Remember, too, this question is not confined to the poorer classes, it is found equally amongst the higher ranks of society, and what takes place amongst the clever, educated, rich people, gradually drifts down to the poor; and when the rich woman took precautions not to have children, as I know from talking with two or three poor women, the servants in the house knew what was taking place and told their poorer married sisters. So that the precautions against conception have come from the top, and have drifted into the homes of the poor.

Then, too, there is another aspect; I do not think you can hold doctors perfectly free from telling many women that they were not able to bear children. There again I am quoting from my own experience amongst friends; two of these are almost physical wrecks; I think they would not have been so if they had not thwarted Nature, and had

had children in a proper, normal way. Then herbalists and quacks of all kinds advertise (especially in Sunday papers) remedies to "correct the irregularities of females," and we know, too, that hundreds of women resort to them, rather than face their own doctors.

On this question, it is recognized that there has arisen a so-called much higher standard of living in all classes; home life is much more expensive than it was even twenty years ago. And so, of course, the age of marriage has risen. If I may refer to myself, I married at nineteen, and my husband was twenty-five, and not an aunt or an uncle thought it a matter which called for remark; whereas when I was asked to a wedding the other day I heard an aunt say, "That girl is only twenty-six, and she is going to get married!" I cannot help thinking that the age at which girls married thirty or forty years ago would work out at just upon nine years younger than the age at which they marry to-day; and that must make a great difference to the birth-rate.

Now I propose to go back, if I may, to refer again to the poorer people. I can speak of an experience of forty years in the poor district of Southwark, going back to a time when seven or eight children in a family were certainly not uncommon. And the oddest part is that with the poor means, the poor money that was earned, I venture to say that the children in the family of seven or eight were as well looked after as those in the family of two are to-day. So I do not think I agree with those who say to-day that this diminished birth-rate is a question of quality rather than quantity. Then, too, if I look at those who prepare statistics for us, I find that the children in a large family have frequently better physique; and my own experience confirms these statistics as far as it goes, for I find that the children generally in a large family are fairly healthy. Well, now, the poor people, the very poor people, are not having children, and I do know that they are taking preventives not to have children. As one woman said, "You have to keep them at school such a long time before they can begin to earn." These are all small things, but they all tell up in the sum total of how people now look upon children. And, of course, the woman now goes out away from her home more and more to work, and therefore the fact of having a child is a very serious hindrance to the income of that family, and she avoids it as much as she possibly can. At one time the poor women mainly did their work in their own homes, and I plead guilty here to being one of those who did their

utmost to try and get the factory work out of the home. Take, for example, rabbit-skin dressing; they used to do all the filthy part—combing, brushing and dressing—in the room where the baby was living, and I worked hard to compel the factory inspector to provide factory accommodation instead of the women doing it in their homes. Now the consequence of that changed condition of things is this, that the woman who formerly had her baby where she did her work now has to go out to a factory, and therefore immediately she has a baby her work stops for some weeks. She, too, tells me frankly that "she hopes she shall not have any children."

And, of course, it is needless, here, for me to deal with the housing question—I am glad you are going to call experts on that—but the housing question is a very serious problem, because you handicapped the working-man with his family when you dealt, under the powers of the Borough Councils, with what you call overcrowding. I mean by that this kind of thing. A visitor goes to a house and sees a woman with four children, and says, "You have only two rooms, and there are six of you in those two rooms. You must have another room!" I visited that family a little while ago and found the woman crying. I asked her, "Did the lady say she would pay for the third room?" That is the point. It is very well, but they do not know how to pay another three shillings. They pay exorbitant rents for the wages they earn, and you make it almost impossible for a working-man with more than a couple of children to get into decent rooms and live in decent houses. We have by our regulations, not thinking out their effects, made ourselves greatly responsible for the present position of the birth-rate amongst certainly the feeble and the poor.

With regard to prevention, that to my mind is the most serious problem of all, because I hold, and feel very strongly, that the married woman or the married man (because it applies to both) who deliberately sets herself or himself to avoid having children must necessarily lower his own moral tone. I do not believe that either the man or the woman can have the same conception of right and wrong, and of what human duty is, if they use this means. When I went to Moscow I went to see the great Foundling Hospital founded by Catherine, and I know I felt very ashamed when I came away, because I said to a Russian doctor there, "You know this is very serious; you have got a couple of thousand illegitimate children, and by bringing them into a place like this you are only encouraging illegitimacy!"

And he said to me, " Well, Mrs. Burgwin, is not that better than what you do in England? There, even your married people murder the children." I knew what he meant, of course—abortions, and miscarriages, and all those things. And he said, " You constantly get suicides, or get the girl who finds herself pregnant murdering her child. We never have that in Russia; she brings her child here, and it is the child of the State." Then he was very keen indeed about our still-borns and our abortions; he had got no end of figures to bring up against me, so that it is really talked of—there is no doubt about that—what the English people as a race are doing. I have some facts that I obtained in Paris; I was talking to a couple of doctors there two years ago, and one of them jeered me, and said, " Oh, yes, you do not have abortions in England, you say. No, because we have got 50,000 criminal abortions taking place in Paris in a year, and we find that numerous Englishwomen resort to that city to be relieved of their pregnancy." Doctors have told me over and over again that Paris is used for this purpose by women who have means. You might ask, What do you propose? Well, personally, I should like to have all the still-births and miscarriages and abortions of all kinds notified, so that we might be able to get the figures of those just as though they were proper births. I think in that way you would get at facts much more than we can get at them now. Monsignor Brown has spoken about teachers, and I should like to have come up with some facts upon that, but as an officer of the Council I cannot do so. But I do hope that will be one part of your evidence that you will be able to get at, because here you have intelligent men and women married, and I think you will generally find that while they themselves are children of families averaging from five to six, when they get married they either do not have children, or at most they have one. If you can get that evidence I think it will be of great help to this Commission.

I do not know whether you have noticed it at all, but Dr. Hirsch, a German physician, writing in 1913, says that criminal abortion is no new thing, but prevention of conception on a large scale is a novel phenomenon among civilized nations, and I take it here you are going to consider very largely the prevention of children which is taking place very largely in our midst. I do not know that I am at all hopeful that by legislation you will be able to effect any drastic reforms. What we must do is to create a wholesome public opinion on this subject. I would say that we as a nation

have to restore the mother to the throne that she occupied in years gone by, and until you do that, until you dignify parenthood once again, and speak of children as "the gift and heritage of the Lord," rather than as "incumbrances," I think you will not stop abortion, and you will never get in touch with this terrible crime.

Dr. Saleeby. Excuse my interrupting you, but do you mean abortion or prevention of conception?—*A.* I would rather say prevention of conception.

Q. The terrible crime of prevention of conception?—*A.* Yes. That is my view of it, and I think many doctors will bear me out and say that married women who have no children are less healthy, and at a particular period of their life certainly suffer much more, and have a feebler old age than those who have children. I think that is the main part of what I have to say.

Chairman. Did your Russian doctor say anything about the death-rate in Russia?—*A.* Yes, we talked a good deal about that, and, of course, here there is always the thought that the fall in the birth-rate is accompanied by a fall in the death-rate.

Mr. Hobson. Are you surprised that there should be an increased death-rate, seeing that the children in the old families of seven and eight were as well looked after in the full sense of the term as the children in families of one and two? Are you surprised that there should be an increase in the death-rate of children?—*A.* Yes, I am surprised, and I think we are taking great measures this year; I know in Bethnal Green great measures will be taken, for instance, to try and show the mothers what to do in cases of summer diarrhœa, and I hope we are going to save hundreds of children by having it thoroughly understood how to prevent that disease.

Q. Supposing you take two families belonging to the same grade of labour; take two men earning the same rate of wages, one having eight children and the other two children. Would you not expect better feeding and better clothing, on the whole, and better attention wherever the element of expense comes in, in the small family than in the larger?—*A.* One would expect that, but one does not always find that, because very often the woman with two children wastes her money much more than the woman with five or six children. It depends on the housekeeper very largely how the children are.

Q. But normally?—*A.* Normally your contention would be right, no doubt.

Dr. Schofield. You have given us many inducements in England for small families, and the whole tendency of all you have mentioned has been that a man should only have a few children. Do you know of any single inducement in this country to have a large family such as you have advocated? Is there any inducement held out in this country for a large family as against the many held out for a small one?—*A.* Not a material inducement, but a very strong moral inducement.

Q. Is that the only inducement you can mention?—*A.* Yes, at the present time.

Dr. Saleeby. You admit that it is conceivable there are cases where it would be injurious to a married woman to have a child?—*A.* Oh, yes.

Q. Then in such a case, where you would regard prevention of conception as a crime, you would advocate abstinence?—*A.* I should distinctly, and for her health's sake too.

Dr. Schofield. You have met with many cases, no doubt, in your life of the terrible results of large families on the mothers?—*A.* Yes.

Q. It has been borne in on me so very much as a physician. —*A.* You mean where there is disease.

Q. Yes, but even in healthy women I mean—continually having children—too much child-bearing.—*A.* I do not think a healthy woman suffers from too much child-bearing.

Chairman. May I ask whether you consider unlimited and unrestricted increase of population in an overcrowded country a thing to be desired?—*A.* Well, I think that either people should abstain from marriage or they should accept the full responsibilities of it. I do not know that we are overcrowded. I know that it is stated, but it is not really so; there is plenty of room in our country now.

Dr. Stevenson. May I ask you what is your impression of the relative rate of increase among the families of the very poor and the worst classes of the population with whom you have come a good deal in contact—the families, for instance, from whom your mentally defective children are derived. Are these on the whole, do you think, larger or smaller than the average?—*A.* Oh, larger; but there again they come of a diseased stock.

Q. And what is your impression as to the progress of the change in regard to the procreation of children amongst such stock as that—the submerged tenth and the mentally defective?—*A.* Oh, they do not think about it either way.

Q. Their reproduction is going on unchecked?—*A.* Oh, yes. Of course a great many of their children die. A

woman brought up some time ago said to me that she had had sixteen children. I asked how many of them were alive, and she said three. She did not seem to think that was anything to be surprised at. But then that was a woman who never ought to have been married; she ought to have been segregated.

MONSIGNOR BROWN. Do you think among the lower classes having a considerable number of children is regarded somewhat of a reproach?—*A.* Yes, I do.

Q. Do you think that is a marked change as compared with thirty years ago?—*A.* Oh, yes.

Q. Could you analyse the reproach for us: is it a reproach against the husband, is it a reproach against the wife, or is it a reproach against both? Is it a sort of sense that they are undisciplined people, who indulge too freely, or is it that they are bringing children into the world whom they cannot provide for?—*A.* Yes, I think bringing children into the world that they cannot provide for.

Q. Do you think one of the reasons is that a neighbour in the court might jeer, or is it rather that the woman is dragged down somewhat by the household care and burden of things, and is not able to enjoy such a good time?—*A.* I do not think it is amongst the neighbours themselves; I think it is often the people better off who tell her so.

Q. Employers, for example?—*A.* Yes. I do not think it is amongst her own neighbours.

DR. STEVENSON. Is such a mother very much influenced by the opinion of her employer?—*A.* Oh, yes, they feel it very much. They have told me that So-and-So has said such things as that. That has been told me over and over again. They will cry about it.

Q. You think they take their opinions to a considerable extent from their superiors in the social scale?—*A.* Yes.

MR. HOBSON. Both the opinions and the practice come down from above?—*A.* Yes, I think so.

DR. GREENWOOD. I take it from you, and I think we all agree that the cost of living has increased. Supposing you have a married couple under a certain income, they have three courses open to them. They may have children in a natural way, an unlimited number. In the second place they may completely abstain from sexual intercourse, and in the third case they may use preventive measures. Now I think we inferred from your evidence-in-chief that you considered that the people in the last case undergo some moral deterioration owing to the practice being unnatural?—*A.* Yes.

Q. In the first case, supposing these people have a very large family, they are likely to find it difficult to make both ends meet, are they not? I mean, that is the experience you find? Do you think it is possible that the shifts and ways of life associated with being very hard up may exercise some deterioration on the moral character?—*A.* Oh, a different kind. I should not compare the two. As a matter of fact, you must know, as well as I do, I think, that often people with a family of six children get on as well as a family of two. Take two clerks, one with six children, and one with none, and I venture to say that the happier home is the home with six, and they seem to be as well off. It depends on how the young people who are married intend to spend their money.

CHAIRMAN. But how if you compare the six with two, instead of with none?—*A.* Well, it does depend so very much on the married couple themselves.

DR. GREENWOOD. Do you not think, as a matter of simple economy, a family of six does cost more than a family of two, and even if one parent is a better manager than the other, still there is required a rather larger income?—*A.* Yes, and I venture to think that very often the man with six does get a rise in salary, and does do better very often.

DR. SCHOFIELD. Then there is another inducement besides the moral one?—*A.* Well, I only know instances where I think it has been so.

DR. GREENWOOD. I want to question you a little on this point, because it is really rather a serious question. You have reached this decision, I understand—that you do not consider the moral deterioration associated with trying to make both ends meet when you really cannot do it—you do not think that is as serious as the moral deterioration associated with interfering with natural conception?—*A.* I do not compare them.

Q. Could you give us any evidence of that at all?—*A.* The medical men who are coming before you—I think Dr. Routh is one—will give you very strong evidence on that point.

Q. You notice, of course, in the statistics that the fertility of the professional classes is very much lower than the fertility of the working classes. You agree on that point?—*A.* Oh, yes, those are facts, of course.

Q. You probably also agree that the difference, for example, shown by the recent Scotch census between, say, the fertility of the clergy and the fertility of the crofters is so very large that you can hardly attribute that to differences

in physiological fertility. Would you think so?—*A.* I do think this—that the men and women of higher intelligence—I do not think that they make use of preventives, and I do see that they have fewer in family. That is my own experience continually.

Q. You think, for example, that the difference in fertility between an average of, say, three to four children at the fertile period as compared with seven—taking the case of the professional classes compared with the crofters—is due not to artificial limitation in one case more than in the other. Do you think it is a question of temperament?—*A.* I do.

Mr. Hobson. The whole of that difference?—*A.* I do not say the whole, but very largely, because that is one's experience of professional people. I know a great many.

Dr. Saleeby. Your evidence in that respect is in striking contradiction to the result of the Fabian Society's Inquiry, published about 1905 and taken among people admittedly exceptional, intellectual and thoughtful people, which shows that there was a systematic use of prevention. It is the only really detailed inquiry into the inwards of this matter yet published.—*A.* That is not within my experience. I did not know that was the finding of that Inquiry.

Dr. Greenwood. Assuming for the sake of argument that the difference between the two classes is due to the greater prevalence of artificial means in one than in the other, would you infer from that that the average morality of the clergy, let us say, is decidedly inferior to that of the crofters?—*A.* I still say that I consider it immoral and degrading to prevent having the child if people are married. I hold that view very strongly.

Q. You do not think, for example, that that needs modification in the case of those persons who consider that education is of great importance, and who feel, let us say, that they are unable adequately to educate more than a certain number of children?—*A.* Well, there again it is the point of view.

Q. But the point of view is a little important, is it not, in judging the moral question? I mean you would not wish us as a Commission to express condemnation on moral grounds unless they were not open to any possible criticism?—*A.* Of course I hold that matrimony brings its obligations, and that if I enter into a covenant, I enter into those obligations, and that if I do not keep my covenant, if I break away from it for other considerations, that is an immoral proceeding.

Dr. Saleeby. A covenant with whom?—*A.* A covenant between two persons.

Dr. Stevenson. If the two persons married with the clear understanding what the course of the married life would be, there would be no covenant broken, would there?—*A.* No covenant broken, but I do not quite see why they get married.

Mr. Hobson. But they may have their private reasons. Supposing they agree to get married and to have two or three children, does that affect your view at all as to the immorality of their restraint?—*A.* Yes, I still say they ought not.

Monsignor Brown. Does Mrs. Burgwin hold that the use of marriage between people who agree to exclude generation is wrong?—*A.* Yes.

Dr. Saleeby. There is a physiological fact which is quoted perhaps with more strength than it is worth, about the relative infertility of sexual intercourse at the intermenstrual period, and the higher clergy have lately considered that matter, and have come to the conclusion that it would be permitted to recommend to their flocks that, where it is desired to avoid children, sexual connection may occur at that period. Would you regard that equally as a crime?—*A.* No, I should not. I think that is physiologically correct.

Q. Therefore you have no objection to the taking of sexual pleasure though the intention be not to have children?—*A.* I say it is not right to take means to avoid having children, and I do not call that taking means. It is the artificial means I strongly object to.

Monsignor Brown. Would you allow people to marry on a pre-nuptial agreement to limit themselves to the intermenstrual periods?—*A.* I have never thought about that.

Dr. Saleeby. How would you regard an arrangement under which the husband would look in his diary and notice that the date was so-and-so, and that therefore he could indulge in intercourse, knowing that that being the date it was unlikely he could have children. Would you regard that as legitimate and innocent?—*A.* Yes.

Dr. Greenwood. Do I gather that you would advocate if possible a complete prohibition—a really efficient prohibition—of the sale of anti-conceptual means?—*A.* Yes.

Q. Have you considered in that connection the fact that one of the most largely used preventive devices is also used as a prophylactic against venereal disease?—*A.* There again I was almost going to say I am against the remedy

there, because, of course, chastity is the only correct remedy.

Q. Do you not think that is a little hard upon persons who become infected by venereal disease innocently?—*A.* You do not mean that you think a man is entitled to marry who is even an innocent victim to venereal disease, do you?

Q. I am not giving evidence, you know.—*A.* I beg your pardon.

Q. I am not giving evidence, but the point I would like to put to you is this—that supposing a man—let us agree, very improperly—commits adultery and contracts venereal disease, then if none of these anti-conceptual devices are employed, he may convey the disease to his wife, who is an innocent party. Do you not think it would be a little inadvisable to limit the possibility of preserving the wife from that?—*A.* Well, of course I consider he should have no connection under those conditions, especially if he knows it.

Dr. Saleeby. Would you not allow her to protect herself by the use of a pessary containing an antiseptic?—*A.* I know women do have to do it, but I do not understand it. A man like that should not have any opportunity.

Q. But as they do?—*A.* I would not provide remedies to make it possible.

Mr. Hobson. You would sooner the woman suffered?—*A.* No, I would make it impossible for him to have connection at all.

Dr. Saleeby. Then how would you deal with his disease?—*A.* You must not ask me about that. I am a Member of the Royal Commission, and I do not want to be pressed on any question about venereal disease on account of that.

Q. You say it is criminal to use a preventive. May I ask what is your criterion of the criminal nature of the act?—*A.* Because, as I say, a person marries, and we say in the service of the Church to which I belong that it is for the propagation of children, if you are of that age.

Q. But supposing they are married at a Registry Office?—*A.* Well, I suppose they still marry with that idea, do they not?

Q. Supposing they do not?—*A.* Then why do they get married? Because I do not understand what marriage means from that point of view myself.

Q. But that is a different statement from calling it criminal to employ a preventive.

Chairman. In the Church of England service that is

only one of the purposes of marriage?—*A.* Oh, I know, of course.

Dr. Saleeby. I do not like the word "criminal."—*A.* I know you do not like it, but I use the word "criminal" with full knowledge.

Dr. Schofield. You use the word "criminal" irrespective of the purpose for which preventives are used—they may be used legitimately or illegitimately, may they not? Might not one use be criminal and the other not? Would you agree with that—that there may be a legitimate use for such things, and that they may be used in the most legitimate way? Would you admit that? It is the purpose, surely, that makes the criminal? What would you say to that? Would you allow that it is the purpose for which a thing is done that makes it criminal or not in such a case?—*A.* Well, I suppose the purpose of using these preventives is to prevent conception: is that not so?

Q. Yes.—*A.* Well, I say that that is criminal.

Q. In all cases? I have patients who are found to have contracted violent, rapid consumption, and the husband is a man who simply obeys the dictates of his own instincts, and the wife is recommended to use a preventive on account of her condition. From a moral point of view, from a higher point of view, would you object to that?—*A.* Yes. I think that man should abstain.

Q. But surely if he will not, the wife's duty is clear. No doubt that is a counsel of perfection, but as every man will not follow that, surely it is the wife's duty to perform her part if the husband fails in his. That is the trouble.

Chairman. If you interfere with the sale of preventive devices, you increase the amount of abortion. A comparison of the United States with our own country shows that?—*A.* You are speaking of the herbalists and quacks. Of course, I would have very drastic regulations with regard to those people.

Mr. Gardiner. You spoke of a husband and wife entering into obligations—entering into a covenant which suggested the obligation of bearing children. Might they not also consider other obligations, the maintenance and education and so on of these children? I mean, what precise construction would you put upon marriage "obligations," when you use the word?—*A.* I put the natural inference, that they will rear their children.

Q. Yes, but you said that the prevention of children would be the breach of an obligation, suggesting that the obligation was to produce as many children as possible.

Might not their "obligation" include a reasonable restraint, in view of the educational and other necessities of a certain number of children?—*A.* Well, you see, the moment you say that, you leave it to every person to decide what they shall do, and you give the whole case away.

Q. But you define the obligation simply as the production of children?—*A.* Yes.

Dr. Saleeby. As many as possible?—*A.* I do not say as many as possible. You notice that really healthy people do not have these tremendous families that you mostly seem afraid of; my experience is that they do not.

Dr. Schofield. Is not the morality of the action of the prevention of procreation dependent upon the reason for which it is done, and not on the fact of it being done?—*A.* Yes, that must weigh with one, of course.

Q. Surely?—*A.* I admit that it must weigh with one.

Q. And you can conceive of cases where it could be done with the most upright intentions, and in fact where it would be wrong not to do it?—*A.* Yes. You see, I hold very strongly that if there are certain questions of health, disease, and so on, then there should be no connection.

Q. Yes, but you cannot always govern the husband's actions, and then the wife has her responsibility surely, and if the husband fails in his, there is no reason why she should fail in hers.

Dr. Savill. What you mean, I think, is an ideal condition of affairs. I do not think any one, deep down in their conscience, does not agree with you, and yet many do say that, human nature being constituted as it is, they cannot always live up to that ideal condition of affairs. And when you talk of marriage in that way, the obligation you mean really is not confined to the two parties, but the State comes in, because after all marriage is only a contract permitted by the State, that people shall live together in return for a great many privileges. It is a covenant with the State, and you are defrauding the State if you do not have children?—*A.* Yes.

Q. Would you think that complete abstinence, or limitation to inter-menstrual periods, was possible to the very poor in the crowded districts?—*A.* Yes, I think so. I do not see why not. Very largely it pertains amongst the Jews; I have inquired amongst them in the crowded houses of Whitechapel—more crowded than many of their poor Christian neighbours—and it is very rigidly observed.

Prof. Gollancz. They do not have smaller families?—*A.* Yes.

Dr. Savill. Mrs. Pember Reeves assured us that amongst the poor people they work with it was quite impossible owing to the way in which they lived crowded together—utterly impossible—and I wanted very much, and the Commission would want also, to have evidence that that was done in poor districts?—*A.* You can get it amongst the Jews.

Prof. Gollancz. Of course sanitary conditions and other things also play a great part in that?—*A.* They are very particular about that.

Dr. Savill. That only points to the fact that if you hold up this idea, or ideal, that preventives are perfectly morally justifiable, even the best type of people become so accustomed to it that they will employ them, whereas if you held up the other ideal you would also get them to live up to that ideal, and thus arrest that deterioration of character which undoubtedly does occur among a great many people.

Monsignor Brown. On the question of the employment of women, do you think, quite apart from any desire, if not so employed, to restrict their families, that the loss of income and the increased expenses following on child-bearing is an inducement to use preventives?—*A.* Oh, certainly; I have no hesitation in saying that.

Q. And that is not limited to what are called working women?—*A.* Oh, no.

Q. But goes up to the professional class?—*A.* Quite so.

Q. Would you say that is very strongly marked amongst teachers?—*A.* I would rather not answer that.

Q. Is it a very serious disability to a teacher—does it weigh very heavily on a teacher who will be having, say, three children in six years—a married woman? Is not the loss of income very considerable?—*A.* Well, she is away seventeen weeks, and she gets full pay up to nine weeks and half-pay up to eight weeks. But then managers engaging teachers, married women, constantly ask, "Have you any children? How many? What age?"

Q. And she has a lurking fear in her mind that if she is considered likely to be child-bearing she may not be appointed?—*A.* Or if she has a young child; the presumption would be that the young child may contract measles and other infantile diseases, and that the mother may be away attending to it; and many managers would rather not take them.

Mr. Hobson. Is it your experience that when working people get into a higher wage-earning condition they

enlarge their families?—*A.* No, I do not know about that, because so very often that higher wage comes rather late in life.

CHAIRMAN. Thank you very much, Mrs. Burgwin.

The Witness withdrew.

Meeting.—March 18, 1914.

Chairman.—The REV. JAMES MARCHANT.

Witness examined.—MR. WINCH, Secretary, Guinness Trust.

The Chairman announced the receipt of a letter from Dean Inge regretting his inability to be present, and requesting him (Rev. J. Marchant) to take the Chair.

REV. J. MARCHANT (Chairman). We should like an account of the housing accommodation you provide, the number of tenants you have, the rules governing their holding of the tenancy, and so on.—*A.* I will make a general statement about the Trust, and you will no doubt stop me if I am too discursive. The Trust was founded in November 1889 by Lord Iveagh, then Sir Edward Cecil Guinness, who gave £200,000 for the objects of the Trust to be carried out in Dublin and in London. Afterwards, in 1893, the Goldsmiths' Company gave £25,000; and those two sums, with the accumulations of income, represent our present capital, which at the end of last year amounted to £465,000 roughly, in addition to a reserve fund of about £63,000. The idea that is expressed in the Trust Deed was to house persons who, generally speaking, had not been reached by existing agencies at that period, and the idea originally was to let rooms at something like 1*s.* 6*d.* per room per week, taking in only those not earning more than 20*s.* per week. But that was found quite impracticable, and our rents average something like 2*s.* 1½*d.* per room per week, while the class of people we took until 1912 were those earning not more than 25*s.* per week at entry. This last year we have gone up to 28*s.* per week at entry, but that would only apply to one or two buildings. Those rents include services which are not usually provided by landlords—at least not all of them; we provide venetian blinds in the rooms, the tenants have the use of a bath which we provide—that is

to say, a bath not attached to the tenement, but in separately built bath-houses, which are open on certain nights for men and on certain nights for women. Attendance is provided at these baths, and all the tenants have to do is to take their own soap and towels. Then they have urn-rooms, from which they can get boiling water at breakfast and tea hours. At all the buildings except one there is a large common room provided for games, etc. And in addition we fit blinds and do the chimney sweeping. The cost of these services is roughly 3*d.* per week, so that in making a comparison of rents one has to deduct that amount from the 2*s.* 1½*d.* which is our actual average rent. We have a census each December, and last year the average wage of those then living in our buildings—at entry, I mean, not what they were actually earning in December, but at the time of their entering the buildings—was 19*s.* 1½*d.* per week. Every twelve years we have a practice of verifying those wages.

Mr. Hobson. You are now giving the man's wages?—*A.* Yes; we ignore anything else.

Monsignor Brown. You do not include the self-supporting women?—*A.* Oh, yes, we should take them in.

Mr. Hobson. You take the average wage of the head of the family, man or woman?—*A.* Yes. At the 31st December that worked out, as I say, at 19*s.* 1½*d.* At some of our buildings we have considerably more demand than we can supply, and of course we always give the preference in that case to the poorer applicants. In Bermondsey (Snow's Fields) we have to take everybody who comes, provided the wages are within the limits. We stick to that rule. There we may go up to 28*s.*, but in Southwark we should not go up to 28*s.*, because we can fill the buildings with the poorer class of people. Altogether we have provided now 2,625 dwellings. We have been standing still for the last eleven years, because our buildings have been in advance of our income; we had a loan of £65,000, which is now, however, paid off—we finished paying it off last year, and have just bought another site in the Kennington Park Road from the Ecclesiastical Commissioners.

Monsignor Brown. What do you intend putting up there?—*A.* Five hundred and fifty rooms, roughly. Our buildings so far have all been built upon the associated principle; that is to say, the w.c. and the scullery have been in common between two families, and the laundry is sometimes used by four or five families, each having its use for one day a week. Our new buildings will be self-

contained. I do not suppose you want any expression of opinion from me.

Rev. J. Marchant (Chairman). Yes, certainly; we shall be glad of anything you are good enough to tell us. How large are these dwellings you speak of? What do you mean by a "dwelling"?—*A.* We have 489 one-room tenements, 1,423 two-room tenements, 617 three-room tenements, and only 37 four-room tenements. If I may express my own opinion, the great need of the present day is to provide, not for those with no families, but for those with large families; and in our newer buildings we are putting in a much larger proportion of four-room tenements.

Monsignor Brown. Is that distributed fairly evenly through each set of tenements?—*A.* I was giving you there the total figures.

Rev. J. Marchant (Chairman). What do the four rooms consist of?—*A.* Living-room and three bedrooms.

Q. And the three rooms?—*A.* Living-room and two bedrooms.

Q. Is the kitchen thrown in?—*A.* That is the living-room. Of course, in many cases the so-called kitchen is also used as a bedroom. Lord Iveagh's object all the way along has been that the Trust shall be worked on strictly commercial lines, and we have fixed the return on capital at 3 per cent., plus sinking fund.

Monsignor Brown. Is the sinking fund a large charge or a low charge?—*A.* The actual figure is ·2375 per cent., practically about 4*s.* 6*d.* per cent. at 2½ per cent. As a matter of fact our actual return, after deducting management expenses, but without deducting sinking fund, was 3·34 per cent. in 1913, 3·67 per cent. in 1912, and 3·31 per cent. in 1911. The return of the various buildings varies (I am taking last year's figures) from a minimum of 2·71 per cent. to a maximum of 3·7 per cent. The rents vary, of course. At our newer buildings we have gone on the basis of making each site pay for itself. Our rents in our newer buildings are higher than those in the older buildings. They vary according to the number of floors. In our first building the rents are from 1*s.* 9*d.* to 2*s.* 9*d.* (one room), 2*s.* 6*d.* to 4*s.* (two rooms), and 4*s.* 6*d.* to 5*s.* 6*d.* (three rooms).

Q. Which was the first site?—*A.* Brandon Street, Southwark. At our last building, in Hammersmith, the rents are: one room, 2*s.* 6*d.* to 3*s.* 3*d.*; two rooms, 4*s.* to 5*s.* 6*d.*; three rooms, 5*s.* 3*d.* to 6*s.* 6*d.*; and four rooms, 6*s.* 3*d.* to 6*s.* 6*d.*

Mr. Hobson. Is that increase in rents due to increased cost of building, or to increased accommodation, or both?—*A.* Largely to increased cost of building. Fulham Palace Road cost nearly 10*d.* a cubic foot, whereas the earlier buildings cost only between 6*d.* and 7*d.*

Dr. Saleeby. The new buildings will be of the same type, will they?—*A.* No; the tenements will be self-contained—that is to say, each one will have its own scullery and w.c.

Q. But you are not building anything in the nature of cottages?—*A.* Oh, no. All our buildings have been in central districts up to the present time, and unless the land were given you you could not possibly build cottages. Our new site, which was supposed to be sold to us on cheap terms, cost £11,000 an acre, so that you can see the land rent per tenement will work out at about 2*s.* 6*d.* a week. And as I say, the Ecclesiastical Commissioners professed to sell to us at a low rate, having regard to our objects. It is really not a stiff price for the position.

Monsignor Brown. When you erect your self-contained new buildings, will these other associated services continue?—*A.* Not the urn-rooms. We shall provide the baths, blinds, and also the hot water in the yards, which is our great feature. They can go at any time of the night or day and draw water (hot water) from the taps in the yards. We shall continue that, undoubtedly. Our birth-rate, of course, dealing as we do with the poorer class of people, is rather a high one. Last year it worked out at 36·95 per thousand, and the death-rate, including deaths in hospitals, at 11·96. Our birth-rate has been as high as 45·54, as against the general London average.

Rev. J. Marchant (Chairman). What year was that?—*A.* 1904.

Mr. Hobson. Are most of the people coming into your dwellings young people, recently married?—*A.* Yes; I think most of them.

Rev. J. Marchant (Chairman). How far can you go back?—*A.* I can go back to the beginning, but the earliest records I have here are 1904.

Monsignor Brown. Are those the actual births within the walls? Supposing a woman went to the lying-in hospital?—*A.* It would include that. In the same way the deaths of those who die away are counted.

Rev. J. Marchant. How many have you in residence now?—*A.* On the 31st December last the number was 9,294.

Q. What is the average length of tenancy?—*A.* It varies with different buildings. In Bermondsey it is a very fluctuating tenancy. Last year, out of 2,625 tenants, 732 left, and the average duration of the tenancy of those who left (I have not the tenancy of those still in the buildings) varies from 228 weeks—just over four years—downwards.

Mr. Hobson. I notice there is a reduction in the mean population; does that mean that there are places unused, or that there is a reduction in the number of persons, on the average, in a room or set of rooms?—*A.* The mean population is practically the mean population taken at the end of the year as compared with the previous year; and as a matter of fact we had an exceptional number of vacancies in our Vauxhall buildings.

Q. I notice it is several hundreds less?—*A.* My own opinion is that the housing pressure has to some extent diminished.

Monsignor Brown. What was the other extreme as regards length of tenancy? You have given us the maximum?—*A.* Yes; and the minimum was fifty-six weeks—just over a year.

Q. That is very unevenly distributed, I suppose?—*A.* Very; yes. You find a certain percentage of people are always in and out. We have a large number of people who have been in the buildings ever since the respective buildings have been opened, but, on the other hand, there are a number of people of the other kind. I had one such case yesterday; they have been in and out three times in two years.

Q. Take Bermondsey, where there is a great deal of fluctuation; do you think the migration—following the work—accounts for it?—*A.* Yes, to some extent, but they get into difficulties all round, and go away for a time. It is astonishing the amount of credit they get—the temptations put in their way—even that class of people.

Q. Tradesmen, as well as moneylenders?—*A.* A lot of hawkers and such people.

Q. You always get your rent?—*A.* We lose very little rent, as a matter of fact. Our gross rental last year was £29,918, and our losses were £58 10*s.* 9*d.*

Mr. Hobson. Are the people who occupy one room to any extent single persons?—*A.* Very largely widows and old people. We do not take single men.

Q. Oh; there will be single women, and women with children?—*A.* Women with children, yes. Are you interested in the mortality tables for the last ten years? They are here.

Q. Is there a greater pressure on the one-room, two-room, or three-room tenements?—*A.* On the three-room, undoubtedly.

Q. The demand is for the three-roomed tenement?—*A.* Yes; three and four. One never has a vacancy, practically, for three rooms; in fact, an outsider never stands a chance.

Q. They move on?—*A.* Yes; from one room to two and three.

Q. Do many move on in that way?—*A.* Oh, yes.

Q. With the growth of the family?—*A.* Yes. We take a census each Christmas, and the superintendent of the building makes out a list of overcrowding cases, which he brings to me, and we adjust them as we are able. If we see no prospect of accommodation they have to go, but if we can possibly do it we try and arrange to give them the extra room they want.

Q. What do you mean by overcrowding?—*A.* We adopt the same rule practically as the London County Council.

Monsignor Brown. Their inhabitant rule?—*A.* Yes.

Dr. Greenwood. It does amount to this, then—that supposing, for example, you get a family with two rooms, what would be the actual size of the family?—*A.* Two adults are allowed to a room; children between five and ten, two are considered to be equal to an adult; children under five are not included. And then, of course, there is another kind of overcrowding, or at least occupancy—indecent occupancy; boys and girls over seven years of age must not occupy the same room, or they must have another room; they do not necessarily occupy it—we have no power of seeing that they do that.

Q. Have you had to turn many people out on account of their having had too large families, and your having no vacancies in two- and three-roomed tenements?—*A.* Not a large number, but we have had to turn some out.

Q. Otherwise desirable tenants?—*A.* Yes.

Dr. Saleeby. There is a great shortage of accommodation for large families?—*A.* Yes. Outsiders have no chance of getting accommodation in our buildings. It is in that class really that the great need exists.

Q. We need scarcely even say "large" families; it applies even to medium-sized families. At what size of family does the house famine become acute?—*A.* I should say when they get four or more children.

Q. Your Trust makes practically no provision for a family of that kind?—*A.* Except that in a three-room

tenement we should be able to put in six adults, according to the County Council rules, or two adults and eight children under ten.

Mr. Hobson. And an indefinite number of children under five?—*A.* Yes.

Dr. Saleeby. Would there be only one w.c. for two such families?—*A.* Yes.

Q. Only one?—*A.* Only one, yes.

Rev. J. Marchant (Chairman). Outside, on the landing?—*A.* Yes.

Q. Under cover?—*A.* Oh, yes; on the landing. The average number of persons per room last year was 1·75, taking the buildings right through, and it varied from 1·49 to 1·93.

Dr. Greenwood. I suppose permission to have children under five in any quantities is purely theoretical? I mean the medical officer of health would interfere, or you would yourself?—*A.* Oh, we should. As a matter of fact the most you would ever find of that age would be four.

Q. It might conceivably happen that one family might have a "baby farm"?—*A.* That is not allowed. It would be stopped at once.

Monsignor Brown. They must be their own children?—*A.* Oh, yes.

Rev. J. Marchant (Chairman). You do not allow lodgers?—*A.* Oh, no.

Dr. Saleeby. You find it feasible to enforce provisions against lodgers?—*A.* I do not mean to say it would not be possible, but as a matter of fact some one on the landing usually gives them away. That is frequently done. But we sometimes get a case like this: "I have a brother coming from the country; may I have him?" "Yes, you may for a fortnight"—or something like that. I do not mean to say we detect every case, but we do detect a great many.

Monsignor Brown. You were saying that in the central parts of London you did not think it was commercially possible—that is to say, on a scheme having proper regard to sanitary requirements—to house except by means of blocks?—*A.* Yes.

Q. That is largely on account of the initial site cost?—*A.* Yes.

Q. How far out would you say that would apply?—*A.* It is very difficult to say. The problem is how many cottages you can put up on a given area of land, and what charge per cottage you can afford to put on for the rent of the

tenement or cottage. I worked it out for our Hammersmith property some years ago, and if we had put up cottages there, we should have had to charge practically 11*s.* a week for the land rent only.

Q. What would you estimate for the economic rent of the buildings? You said 11*s.* would be for the land, practically?—*A.* It would depend on the cottage you put up; the land rent would be the fixed factor.

Q. So that that would really apply very largely to the County of London, except where the county stretches out in the Eltham direction, and that sort of thing?—*A.* I suppose the maximum would be about £20; it might be more—£30 perhaps.

Q. Then if you put up in central London blocks largely consisting of four rooms, the rent question becomes acute there too?—*A.* We can do it with block buildings, because as you increase your outlay on buildings, and get the return on that, you necessarily reduce the return upon the land. For instance, on our new site at Kennington Park we hope to put up the four rooms for about 12*s.* 6*d.*

Q. Five-storey buildings?—*A.* Yes.

Mr. Hobson. What would they pay in the neighbourhood for four rooms in an ordinary house?—*A.* Oh, 10*s.* and 11*s.* a week. In fact, I have known them pay 6*s.* for one room.

Q. In that part of London?—*A.* No. I thought you meant in that particular district. In Chelsea.

Dr. Mary Scharlieb. Do you find that the people appreciate all these comforts?—*A.* The great majority do. Of course, they are awfully poor, but many of them are exceedingly nice people.

Q. Do you find them decent? Do they keep things clean?—*A.* The great majority.

Q. Have you any method of enforcing it?—*A.* Oh, yes. That is the only thing to be said in favour of the associated dwellings as against the self-contained. An Englishman's house is his castle, and if a man has a self-contained flat you cannot very well interfere with him; but when things are used in common out on the landing they must be kept up to a proper standpoint. And apart from the cleaning they do, we ourselves have a periodical cleansing of the traps and that sort of thing.

Q. Your birth-rate is higher than the average of London? —*A.* Yes; that is largely because young people come to us, and largely because our tenants are exclusively from the poorer classes.

Q. At the same time your death-rate is remarkably low?—*A.* Low considering the class. Not so very low taking London as a whole, but low considering that the people are exclusively of one class; although, of course, the higher the birth-rate the higher the death-rate, because infant mortality is rather prevalent.

Q. That is a very serious question—infant mortality?—*A.* Yes. At one of our buildings we have gone two years running without the death of a single child under one year old.

Q. Do you offer any reward?—*A.* Oh, no.

Q. Is there any teaching connected with your buildings?—*A.* Yes; the London County Council have taken classes; we have given them the use of a club-room and provided a gas-stove, and so on. At Snow's Fields, Bermondsey, they hold classes in dressmaking once a week, and a lady doctor gives lectures another day a week to the mothers. At Page's Walk Buildings, Bermondsey (our largest one), some ladies have organized classes; they get instructors from the County Council, and carry on similar work there. And at another of our buildings we have medical lectures by a lady.

Q. Do a fair number of women attend?—*A.* Most of them think they know as much about babies as the lady doctor, but they get an average attendance of something like twenty or thirty.

Q. Even that is something?—*A.* Oh, but as a matter of fact they do *not* know, of course.

Q. Is there any competition—getting the babies weighed, and that sort of thing?—*A.* Oh, yes, they give prizes.

Monsignor Brown. Do you cover London fairly?—*A.* Fairly well—more in South London. We have a building in Southwark, a building in Finsbury, one in Bethnal Green, two in Bermondsey, one in Lambeth, one in Chelsea, one in Hammersmith. You see it goes pretty well round London.

Q. You do not touch the East End much?—*A.* Not the East End. Bethnal Green is our nearest.

Dr. Florence Willey. I should like to know whether you restrict the tenants in any way; do you choose them in any way, or do you take them as they come?—*A.* When they apply they fill up a form giving particulars of themselves and their wages. We inquire as to their wages through my office, and if satisfactory we write on the form how many rooms that person must have. Then it is left to the superintendent. We could not take anybody,

obviously—tramps, and that kind of person. We sometimes do take people by mistake, and turn them out. They have to obey certain rules which they have given to them. Otherwise there is no restriction. The poorer they are, so long as they comply with the rules, the more chance there is of their being taken.

Q. You regulate the number of rooms by the wages, do you?—*A.* Oh, no; by the size of the family.

Rev. J. Marchant (Chairman). We are very much obliged to you, Mr. Winch.

The Witness withdrew.

Witness examined: Mr. Peacock, Estates Superintendent of the Duchy of Cornwall.

Rev. J. Marchant (Chairman). I think Mr. Peacock will also make a short statement before he is asked any questions, in order to put us in possession of the facts relating to the Duchy?—*A.* The first consideration in the re-housing scheme at Kennington was, of course, to provide healthy homes in healthy surroundings, and for that reason more open spaces were provided. Another point was not to have only one class—not to have only the very poor and herd them together, because I think the poor are rather inclined to lose self-respect when they live entirely amidst slums with no better class near; and also because we are putting up mostly cottages, and it is curtailing the usefulness of the land to have cottages entirely, and therefore for the better class of people we put up rather taller dwellings. And then, if you have a certain number of well-to-do, it is easier to treat the estate as a whole, and let a portion of the houses at something less than the economic rent. That is a thing which is always done with a country estate; you treat your estate as a whole. No labourer's cottage in the country can possibly be economic; I do not suppose it pays more than 1 per cent. Therefore, if you have a few better-class dwellings mixed up with the poorer class, it enables you to let a certain number to the poorer people at less than the economic rent. As a matter of fact, probably most of our things only pay just Consols rate of interest and sinking fund, and practically nothing for the land—that is, for the poorer people. As regards the type of the dwellings, the King was very anxious that they should mostly be cottages, and, at any rate in the flats, not more than three floors; partly because I think the example of

Germany has shown that the block dwellings are not really so satisfactory.

Q. You have some particulars of the number of your tenants?—*A.* Yes; the number of houses or flats——

Monsignor Brown. On the main question, could you tell us what is the financial position of your housing scheme? Do you borrow money?—*A.* Oh, no, we do not borrow; we repay by instalments of one-sixtieth; by permission of the Treasury, we draw on our capital.

Q. A sixty-year period sinking fund?—*A.* Yes. Of tenements of one room on the estate there is one at present; of two rooms, 157; of three rooms, 290; of four rooms, 355; of five rooms, 293; of six rooms, 257; of seven rooms, 85; and of eight or more rooms, 838; but then those are better-class cases in Kennington Park Road, etc. I think the tenements most easily let are three or four rooms; two rooms let quite easily also. The number of cottages per acre is about twenty, I think, and all of what we call cottages, as distinguished from maisonettes, have three bedrooms, kitchen and scullery. We have not put up any flats which are not self-contained; even in 1856, I think, when the first model block dwellings were put up of four floors, every one was self-contained, and had its own w.c. and scullery.

Q. You mean those facing the river, opposite the Tate Gallery?—*A.* Yes.

Rev. J. Marchant (Chairman). What are the rentals?—*A.* There is a type of maisonette also, which is a cottage on the top of a cottage, each cottage having its own front door to the street. The two doors are side by side, and one of the doors gives straight on to the staircase. The London County Council has some, and the Ecclesiastical Commissioners have a good many of these. The upper floor contains three bedrooms, kitchen and scullery, the lower floor two bedrooms, kitchen and scullery. We have built recently ten houses of this kind—that is, twenty tenements—and six more are just going to be built.

Q. At what rental?—*A.* We have got some of those at 7*s.* 6*d.* for the three rooms and 9*s.* for the four rooms. The latest have been done in Cardigan Street, where a new road has been built, and there they are much more expensive—10*s.* for the three rooms and 11*s.* for the four rooms; only a shilling more. The Bethnal Green Borough Council, who came down the other day, said they could not possibly do it at that.

Monsignor Brown. Was that having regard to the buildings or the actual site?—*A.* Including the making of

the road. In the new cottages they have unlimited electric light, practically, for 5*d.* to 7*d.* a week. It is not absolutely unlimited, but we give something over the margin which the electric light companies say is used by cottage people.

Rev. J. Marchant (Chairman). Do you shut it off at a certain time at night?—*A.* Oh, no, it is always on; but they are told that if at the end of the quarter they exceed so many units they will have to pay more. But the amount allowed is ample, unless they waste it; it is more than enough.

Monsignor Brown. There is a meter for each house, is there?—*A.* Yes; but they pay a fixed charge for it.

Q. What is your total projected scheme? What does it run to in the way of accommodation? You have only done a portion of it, I think?—*A.* There are some buildings going to be put up for poorer people still. At the present moment there are some homes for old people being put up; it is a sort of little college building, with a quadrangle. The small tenement there is a bed recess, which can be curtained off, with scullery and w.c. There are fifty-four of those, and I think there are four bathrooms and a laundry.

Q. For common use?—*A.* Yes.

Dr. Saleeby. Those are exclusively for old people?—*A.* For old people.

Q. Therefore it does not touch the birth-rate problem?—*A.* No. Then there are homes for growing families projected, of which I have a plan here. I suggested it to the architect as a possibility. This (indicating on the plan) is an expanding and contracting house. There is the nucleus, and here are the living-room, bathroom, and one bedroom. That is a nucleus there, and that is another nucleus there. Between them are four bedrooms. If a family with adult children were put in this, they perhaps would have two bedrooms and the other would have one, with perhaps just a baby or two babies. Then the idea is that as these people grow up, say a son of twenty-two goes out into the world, it would be possible to take a bedroom from here and switch it on to here, by leaving partitions, which can be made fireproof, which is quite simple. So that ultimately *this* may be a family with a baby or two, and *that* a family grown up.

Monsignor Brown. There would be nothing against them under the Building Acts?—*A.* No.

Dr. Saleeby. What does the architect say to this?—

A. I suggested the idea, and he drew this plan out. That is the same thing (indicating another plan), only in this case the nucleus is *there*, and there are four bedrooms, and another nucleus is *there*, and another nucleus *there*.

Monsignor Brown. That also would conform with all the fire regulations?—*A.* Oh, yes; the partitions can be made absolutely fireproof.

Rev. J. Marchant. This is to endeavour to accommodate growing families?—*A.* Yes.

Q. And there is some demand for this?—*A.* Yes. Of course, for the five-roomed tenement there is not nearly so much demand as for the three.

Q. How many do you house over the whole of your estate? What is the population?—*A.* I should think about 8000.

Dr. Saleeby. Have you any vital statistics?—*A.* No; but now we are collecting them. We have only recently begun taking them. One of the conditions of tenancy now is that they should give notice of a birth or death. As regards the number of people who may occupy a tenement, one condition is that the premises are not to be occupied by more than two persons per room, two children under twelve years of age to count as one adult.

Rev. J. Marchant (Chairman). How many families are there in those 8000?—*A.* I should think about an average of three children.

Monsignor Brown. Economically, do you think it possible to re-house all the Kennington people who have been displaced, or would some of the very much poorer ones have to go?—*A.* I should think they probably would have to go. There will not be so many rooms on the estate as before, because there are more open spaces.

Q. And I suppose some of these people, even rack-renting their property, were able to let a little cheaper?—*A.* Yes; letting out in rooms.

Rev. J. Marchant (Chairman). Does the element of charity come in, or is it purely on a business basis, and does it pay?—*A.* It certainly would not pay if one had to buy the land. There is practically nothing for the ground, or very little. When the sinking fund is completed there would be. The old people's dwellings would not pay under any circumstances, neither would some of these homes for growing families.

Q. It is really not a model for outside builders to follow?—*A.* Not unless you take the estate as a whole. If we put up some better-class houses they will pay, and there

will be some profit which can be assigned to making good the deficiency on the others.

Dr. Saleeby. In any case there must be some economic sacrifice?—*A.* Oh, yes.

Q. There is no case in which this could be recommended as a purely paying proposition for ordinary landlords?—*A.* No, I do not think so, on a site like Kennington. Further out it could be done, where land was cheaper. Of course, it is said that cottages do not pay unless you can get the land at £500 per acre.

Monsignor Brown. Given free land, you think your scheme does pay its way?—*A.* Oh, certainly; yes.

Q. There are many people who are low wage-earners who have to live near their work. Take river people, railway people, and so on. I was wondering whether anything could be done to keep them within a short radius of their work, even in three storeys. I quite see the difficulty about five: a five-storey building (I have climbed a great many in my day) is a pretty stiff thing, especially for a child-bearing mother to climb—a terrible thing. But three storeys makes a great difference?—*A.* Yes.

Q. I wondered whether it would be possible to do anything on that line, to see whether you could get some of the poorer ones provided for in that way?—*A.* Of course we have got some in Orsett Street. There are some five-roomed tenements there.

Q. Two storeys?—*A.* Yes; 7*s.* 6*d.* a week.

Dr. Greenwood. As to this question of cottages versus block buildings, you have no exact evidence on that point—I mean as to the superiority of cottages from the point of view of vital statistics?—*A.* No, but in Germany now they have practically abandoned the idea in the newer communities; in the towns where they bought the land outside the town in anticipation of building dwellings for the working classes, they are building cottages now instead of block dwellings.

Mr. Hobson. That is to say, where they prevented the land going up as it otherwise would have done?—*A.* Yes. It has been the policy of practically every German town to buy land fifty years in advance.

Q. Yes, and they are now building cottages on hygienic grounds?—*A.* Yes; they found the children did not thrive in the block dwellings. I think it was Dr. Eberstadt who came over here and went to Manchester, where physical degeneration is, I believe, at its worst as compared with any town in England, and he said he would rather have the

English children, physically degenerate as they were, than the pasty-faced German children living at the top of a block dwelling.

Dr. Saleeby. Why the top?—*A.* Because they do not come down into the air.

Q. Oh, I see. I was thinking they would get more light at the top?—*A.* They would not face the stairs.

Dr. Greenwood. Is not another point to be considered, that the price of the tenements is less as you go up? Is it that the poorest people who live at the top of the building are not necessarily afraid of the stairs, but have less money for the other necessities of life?—*A.* Possibly, yes. Of course the rents in Germany are enormous, in places like Berlin, for the working classes. Forty-three per cent. of the families in Berlin live in one room.

Dr. Saleeby. What is the London figure?—*A.* 1·79 in Lambeth is the number of people living in a room, but I have not the comparative figures.

Dr. Greenwood. Do you think in the case of block dwellings there is any compensating advantage in the fact that they are easier to superintend?—*A.* Yes; for instance, preventing lodgers is much easier in block dwellings than in cottages.

Q. And probably there may be an advantage in the way of preserving cleanliness?—*A.* Yes, I think in that way too there may be an advantage.

Dr. Saleeby. Do you propose to make provision on any considerable scale for growing families?—*A.* Yes, a fairly large scale, I think.

Q. Quite shortly?—*A.* It will begin soon, I think. We are still stuck in several places by having leases out—the old principle of granting leases on lives; they do not fall in, and it is very difficult to get hold of them with seven or eight people between oneself and the original lessee. And until one can get a good big block one cannot very well deal with it. The sites on which we thought of putting up these homes for growing families we cannot get at for the moment.

Dr. Scharlieb. Is any instruction given there?—*A.* Not yet. There is the possibility of our having a sort of institute.

Q. A school for mothers?—*A.* Yes, that kind of thing. That is another very good thing they do in Germany, I think; they instruct the girls who are employed in mills, about motherhood, and it is found that the children thrive better in the case of girls who are employed in mills and

who have received instruction, than in the case of women not employed in mills and who have received no instruction.

Dr. Saleeby. Can you give me the reference for that, Mr. Peacock?—*A.* Mr. Horsfall is responsible, but I think I could find the place.

Q. Oh, I know Mr. Horsfall. *A.* He would be able to tell you.

The Witness withdrew.

Meeting.—April 1, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. Amand Routh, M.D. Lond., F.R.C.P. Lond., Consulting Obstetric Physician to Charing Cross Hospital.

The Secretary. Dr. Routh has kindly consented to make a short statement of the leading points of his evidence, so as to bring the matter more clearly before the Commission.—*A.* I did not know that I was going to be asked to do this, Mr. Dean; but this lecture of mine,[1] which some of the members of the Commission have before them, was really a lecture on Ante-Natal Hygiene. I only touched upon other points having reference to infantile well-being incidentally, as it were. For instance, I did not really more than touch upon the enormous death-rate of infants during their first year of life; that was altogether apart from the consideration of this particular matter. But I was asked to give a lecture on Ante-Natal Hygiene, and I could not avoid, in speaking of that, touching on the reduction of the birth-rate which the Registrar-General and Dr. Newsholme quite definitely show is largely due, not only to the postponement of marriage, but to the artificial prevention of pregnancy by different methods of prevention employed by either the father or the mother. And the point that I particularly wanted to show there was that, according to the Registrar-General, if the fertility of married women in proportion to their numbers had been as high in 1911 as in 1876–1880, the legitimate births would have numbered 1,273,698 instead

[1] *Brit. Med. Jour.*, Feb. 14, 1914, p. 356; April 25, 1914, p. 902.

of 843,505. That is to say, there was a potential loss to the nation, due to that one cause of reduced fertility, of 430,000 lives in that one year, 1911. The Registrar-General considers that although part of that was due to postponement of marriage—in other words, to an increase of unmarried and widowed women in that year—the large reduction was due mainly to deliberate restriction of child-bearing.

I have no doubt that prevention of maternity by *artificial* methods invariably produces physical, mental, and I think moral, harm to those who resort to it—to one, or probably to both. Of course it sometimes happens that one of the potential parents wants a child and the other does not. One frequently hears that a woman refuses to have any children for a time, or even to have any children at all, and, even unknown to her husband, she will either introduce into the passage some chemical agent which will destroy the spermatozoa, or she will sometimes wear a cap over the neck of the womb, which takes the place, in the female, of the "letters" that the men wear. And this can be done without the husband knowing anything at all about it. I have known that happen a great many times. I mean, the husband will bring his wife to the doctor to know why they do not get a child, and the wife will tell the doctor privately that that is what is going on. I am sure it does harm to both if they both agree to it. The act is incomplete; it is not a spontaneous act; and if the act ceases before the proper crisis, as it were, the nervous system suffers enormously if the habit is continued for long. And the result often is that there is a great deal of congestion produced in the woman, at all events. I know nothing about the physical results in the case of the man, but in the woman the result is that the pelvic organs become congested and catarrhal, the womb becomes enlarged, and the result is that later on, when the parents are perhaps better off and want a child, they are not able to have one.

But my main contention was in regard to the enormous ante-natal mortality. I give my reasons for considering that the number of abortions (before the twenty-eighth week) is about four times as great as the still-births. The only actually certain points about it is the number of still-births. In London, in 1910, there were 2,312 still-births, and if that proportion holds good for the whole of England and Wales, which it probably does, the still-births would be 19,700 in that year, 1910. As regards the number of abortions and miscarriages, it is quite impossible with our present knowledge to be sure, for several reasons. One is that,

as far as I know, no attempt has been made to get at a normal series of women to find out the relative proportions of abortions and full-term deliveries. With patients, especially gynæcological patients such as come to me, the proportion is very much higher than the normal, and necessarily so, because, of course, they come in connection with troubles relating to the organs concerned. But almost all authorities think that four times as many miscarriages as still-births is much too small. I may say that thanks to the Notification of Births Act, 1907, made compulsory throughout the country in 1914, a large number of the County Boroughs and towns are also under that Act as regards compulsory notification of still-births, and their average is 3 per cent. and over, instead of 2·2. That would make the proportions very much more as compared with still-births than I am making them. Assuming that the still-births are 3 per cent., and the abortions 12 per cent., the two together are 15 per cent.[1]

THE CHAIRMAN. The twenty-eighth week is the period which differentiates a miscarriage from a birth?—*A.* Yes, children are said to be still-born if born dead after the twenty-eighth week. See footnote for 1914 below. I have shown how large a number of diseases may affect the embryo or the fœtus *in utero*—a few originating from the father, a large number from the mother, and some from the fœtus. Some of these are very frequent causes, a few

[1] This means that 250 infants out of every 1000 births, or one-fourth, die before they reach one year of age. In 1914, 878,882 children were born in England and Wales, and the deaths of infants during their first year of life were 92,166, equal to a death-rate of 105 per 1000 births. A third cause of fewer children being born is the reduced birth-rate which now obtains. We are told by the Local Government Board that if the birth-rate in England and Wales had been the same now as in 1876, 467,837 more infants would have been born in 1914. The following table shows the net result of these three causes in 1914—

Fœtal deaths in ante-natal period	138,249	
Infantile deaths during first year of life	92,166	
Total deaths up to age of one year		230,415
Fewer births owing to reduced birth-rate		467,837
Total loss to England and Wales in 1914 . .		698,252

The number of children who have survived their first year by this depletion by death in 1914 is 786,716, so it is evident how great the loss is, both relatively and actually, in England and Wales alone.

are accidental. Then I went on to show what I thought ought to be done from the point of view of philanthropy and administration and legislation; and my chief points there were that we ought to have compulsory registration of still-births and compulsory notification of still-births, the first being important from the point of view of statistics, and the notification to the medical officer of health of the district being important rather from the point of view of ensuring the subsequent good health of the particular woman concerned and of any future children she might be bearing. For instance, in the case of syphilis, if the spirochæta pallida is found in the still-born fœtus by examination after notification, both the husband and the woman would be treated for that particular disease, and probably any subsequent children would be healthy, especially if the woman was treated during her pregnancy.

Dr. Schofield. Would you just give us, before passing from that, the leading diseases in women—what you consider the leading diseases—that cause abortion?—*A.* Well, there are the acute diseases, acute specific fevers, acute pneumonia, and that sort of thing; and then there are the chronic diseases, among which I put down tuberculosis, but tuberculosis does not appear to very much affect the child *in utero*, very extraordinary to state; but syphilis, of course, is the main cause of these chronic diseases.

Q. Have you included alcoholism?—*A.* I have not in this list, but I have put it in another list. I am reading a paper on the need for research in ante-natal pathology to-morrow, and I have included alcoholism in that paper.

Dr. Schofield. I did not wish to interrupt you; I only just wanted to ask that in passing.

The Chairman. I suppose leprosy would be added in countries where it exists?—*A.* Yes, I suppose it ought to be put amongst the tropical diseases. Then, of course, there are Bright's disease and diabetes in women, and apparently in men too; and Bright's disease in men seems to have an influence upon both sterility and abortion. Then there is lead poisoning. My fifth group amongst women is an extremely important group, those of the toxæmias. It includes large numbers of cases of albuminuria, eclampsia, and acute yellow atrophy of the liver. Then there is a large number of mechanical causes, especially pelvic contractions, vulvar abnormalities, and other malformations and abnormalities about the pelvis which prevent the child being born, and which, if not recognized in time, would lead to fœtal death. Again, there are certain troubles in connection with

the pelvic generative organs; and then come the fœtal causes. It is most important that women should be supervised during pregnancy, not only in well-to-do practices, where it is comparatively easy, but in the case of the very poor. One sees a great deal of difficulty to secure this, but my own idea is that if the maternity benefit and the so-called pregnancy sickness benefit, especially if the administration of this could be transferred from the approved societies, and put in the hands of the Local Government Board, or rather the local health authorities—the medical officer of health of the district—we should get much nearer the supervision of women. For this reason—that if a woman realized that she was going to be entitled to certain benefits, she would the more readily notify her pregnancy voluntarily, and she would much more readily do that to the medical officer of health than to either a panel doctor, or to a midwife, who is not supposed to know much about illnesses during pregnancy. After such notification the woman would be visited by some medical practitioner at the instance of the medical officer of health, and anything in the nature of abnormality or disease could be easily recognized and treated. She would thus automatically come under medical supervision. So that if it could be arranged that the medical officer of health was responsible for all the poor women, from the point of view of the maternity benefit, in his particular district, they would notify their pregnancy to him, they would come under medical supervision, and could be admitted into prematernity wards, hospital beds, or whatever was necessary to have them treated.

Dr. Scharlieb. I suppose that in addition to these diseases which frequently cause ante-natal mortality, you also think there are economic conditions which likewise have an influence?—*A.* Yes. You mean, I suppose, poor dwelling-houses, bad air, poor food, malnutrition, and so on?

Q. Yes.—*A.* Yes, certainly.

Q. Very frequently the wages are not sufficient?—*A.* That is so. It would be a good thing if the maternity benefit could be extended so that women should get from 5*s.* to 7*s.* per week for the few weeks before and the few weeks after confinement; it would be an additional inducement to them to notify their pregnancy.

Q. Of course, you feel that it is very bad for them to go on working in factories or doing anything laborious in the last three months?—*A.* I am sure it is.

Q. So that the pressure of work, combined with bad food

and bad conditions, would be responsible for a good deal of perfectly innocent ante-natal mortality?—*A.* I am sure it is.

Q. Have you any idea about the proportion of ante-natal deaths which are due to syphilis?—*A.* No. That is one of the things which we have to find out. Of course one's idea is that it is an enormous proportion—perhaps one-fourth—one really does not know; but one knows of experts who have examined macerated fœtuses where the mother is apparently perfectly healthy, or whose children born prematurely have died, and beyond the fact that their skin is peeling, and that they look a bit shrivelled, there is not much to show for it; but when you come to examine it for the spirochæta, which, of course, has only been found within the last few years, one knows that from 70 to 80 per cent. of these are syphilitic. That forms part of the 3 per cent. of still-births.

Dr. Fremantle. Seventy to eighty per cent. of all still-births?—*A.* No, of macerated fœtuses—not necessarily from parents who are known and recognized to be syphilitic. The abortions also, clinically speaking, are almost certainly very largely due to syphilis. That is to say, a syphilitic woman, known to be syphilitic, will have at one time a still-born child, at another time miscarriages—two or three running, perhaps. But the unfortunate thing is that spirochætes are only found rarely in early abortions, so that scientifically we cannot prove that they are syphilitic. That is one of the objects of the researches into these cases.

Dr. Scharlieb. That is one of the reasons why you particularly desire notification of still-births and of abortions, in order that the material may be sent to the laboratories, and information obtained and disseminated?—*A.* Yes; at present I am very anxious not only that they should be registered, but at the same time should be notified to the medical officer of health, not only still-births, but every abortion with a formed fœtus.

Q. And even in those cases where the embryo has perished, you may be able to get some information from the ovum?—*A.* Yes.

Q. Do you not think that you will need to get either a State subsidy or some other financial assistance, in order to get practitioners to send the material in to the laboratories? Do you not think doctors will require a small extra fee?—*A.* For notification?

Q. Yes.—*A.* I think it would be very much more satisfactory if they did get an extra fee for notifying these cases,

because it will involve a good deal of trouble, especially if they have to give the cause. The cause is very difficult to arrive at, even with research, so that in a large number of cases the certificates would be given with a query opposite the place where the cause was supposed to be given; and my idea was that when many such cases were thus notified, the medical officer of health would be led to give instructions in his district that all abortions and still-births should be sent down to the laboratory and there examined.

Q. We should need a very large increase of laboratory examination and laboratory workers?—*A.* Certainly, and if the fœtus were put in a sealed jar in a suitable solution, and it was not able to be dealt with properly at the medical officer of health's office, he would send it to the nearest laboratory, in the nearest town where there was one, properly labelled, with a certain amount of clinical history, so that the cause of death could be identified.

Q. Does it appear to you from your experience that there is a considerable proportion of criminal abortions? —*A.* Well, I think there is, but I have no idea of the proportion.

Q. Many people do not recognize that it is wrong, do they? Do you not think the public conscience wants instructing? —*A.* Yes; they cannot understand why a doctor's conscience varies from theirs; they say, "It cannot be alive yet, it is only so many weeks."

Q. So that that is one of the things we want to do: we want to educate the public conscience to realize that life is life from its very inception?—*A.* It is always a great comfort to me that it is criminal as well as wrong—that one can show that the law considers it to be a murder.

The Chairman. You say in your lecture, "Every method of artificial prevention of conception is harmful in both its physical and its moral effect." That is, of course, by no means universally admitted, is it? It is a matter of very great importance to this Commission!—*A.* Well, personally, I believe that every *artificial* method does do physical harm, with the only exception that supposing the husband uses letters, for instance, I do not think the harm is very much to the wife, except that she misses the stimulating effect of the semen itself. And there is not the least doubt that that has a very powerful effect; it is absorbed to a certain extent, and seems to stimulate and even nourish the woman in a way which we do not at present understand.

Q. I think it will be generally admitted, as far as I can make out, that withdrawal is mischievous; but we have

been told that the use of these other things which you mention is harmless to both sexes. That is what I want to get at.—*A.* Well, I am sure that people who use letters suffer from it in time. It is not the same thing. It is difficult to explain how it does act, but I am only speaking of practical experience with one's patients who have adopted these methods. To begin with, supposing that both the man and the woman are very much averse to having a child. It is not a normally conducted physiological act at all; it is an act accompanied more or less by fear the whole time, and the nervous system cannot stand being, thus, in anything rather than the passive attitude of affection which ought to exist.

Dr. Schofield. Is that not mental rather than physical, that which you have just now described?—*A.* It is mental, but it has a physical effect. You cannot have the nervous system in this state of dread without a physical effect.

Q. Your remedy is unrestricted increase of population?—*A.* Yes, with separation for a time by mutual consent, as we have biblical authority for it, I think.

Q. You do not recognize any disastrous consequences that must follow from unrestricted increase of population?—*A.* No; I think things would adjust themselves. I do not think there ought to be any limitations at all beyond what I have stated.

Q. What would be the consequence of that in a small, densely populated country like this?—*A.* Well, but it is not so very densely populated, is it, considering the amount of emigration that is possible from such a country as this?

Q. Still, it was the medical question I really intended to ask you about particularly—whether you had any evidence as to these evil physical effects?—*A.* Certainly, from the patients one sees.

Dr. Greenwood. Before you leave that subject, I should like to ask a question, in continuation of what the Dean was asking. Sir Francis Champneys gave us some evidence on this same point, and he was rather heckled on the same question, and I made a note, from the shorthand report, of some of his replies. He pointed out to us that he considered that absolute childlessness—complete prevention—in his judgment did have deleterious effects, and then he went on to say, "I have never seen any physical harm done by moderating the number of children."—*A.* Was he speaking of moderating the number of children by artificial methods, or by partial abstention?

Q. We asked him *seriatim* about each of those methods

that we knew of. First of all, as to soluble pessaries, he said, "I do not think they do any harm." Then he was asked as to the use of sheaths on the part of the husband, and his reply was, "Well, they do sometimes, but as a rule not." The last question was, "The other method we have had commonly practised are fixed pessaries precluding the entrance of spermatozoa into the cervix?" and his answer to that was, "I have never known any physical harm result from that if they are kept clean." The point is that it is a little difficult for the Commission to appraise opinions, and I was wondering whether you had anything in the nature of statistics either from your own experience or case books from which you could give us information as to actual harm done which you could trace to the use of some mechanical means?—*A.* I have nothing in the way of statistics, and they would be very difficult to get, because one does not care to make very full notes in a case book. But, speaking generally, I am quite sure that preventive methods do harm to both. And as regards the quinine pessaries that are so generally used, they may be used for a long time to prevent children, and do no harm, but every now and then people come with quite distinct chronic vaginitis and endocervical catarrh, which I am sure may be due to that cause. Perhaps such cases are more susceptible to quinine than others, or that they use them oftener or keep them there longer, but I have no doubt whatever that they do produce inflammation in some women.

Q. You would agree, I take it, that there is a difference of opinion amongst experienced gynæcologists on this point, as to the deleterious physical effects of the use of these artificial means?—*A.* I thought everybody considered they were more or less harmful.

Dr. Fremantle. There is one other point arising out of that, and that is the method of syringing with a dilute antiseptic. Do you think that that method also has physical deleterious effects?—*A.* I do not think there is any harm there.

Dr. Ettie Sayer. Do you think that the repeated congestion of the uterus might lead to a deterioration of the muscle, or to a tendency to fibrous misplacement?—*A.* I am quite sure that if a woman's uterus—married women I am speaking of, but it applies also in the case of unmarried women who have strong sexual instincts—if the uterus is not being physiologically utilized as in maternity, it is extremely likely to become enlarged and indurated, and fibroids may develop.

Q. I meant particularly if preventives were used?—*A.* I do not think more so, but the frequency of coitus must be considered.

Dr. Greenwood. Do you think it utterly hopeless to expect to get what I may call statistical data on this matter? For example, I think it was suggested in some questions to Sir Francis Champneys that the use of preventives during a certain period of married life might result in sterility at a later period, when preventives were abandoned; and I thought that perhaps some information could be got on that subject from the case books of an experienced physician like yourself.—*A.* I do not think you could get anything statistical like that, but there is no doubt whatever that a large number of newly married couples decide, for instance, that they will not have a child for one year, or for two years. And then they come to you two or three years afterwards and tell you this, and that now they cannot get one; and this is simply because the parts have been brought into a condition which seems to quite prevent the spermatozoa getting beyond the cervix.

Q. But if we could get that statistically demonstrated, you would agree, would you not, that it would be enormously important evidence? You do not think that is a possibility?—*A.* Well, it would simply come to this—that out of a certain number of private patients that the doctor has seen in the year, a certain number had these particular symptoms associated with preventive methods, but I do not think it would help much statistically.

Q. With regard to the question of the increase in the use of preventive methods, there is a sentence quite early in your lecture which says, "This is borne out by all observers of the tendency of the age and by one's professional experience in all ranks of patients." Could you tell us a little bit more about that? Does that mean that within your experience, within, say, the last twenty years, you could definitely say there has been a great increase in the use of preventive measures by middle-class and upper-class people?—*A.* Yes, I am quite sure of that.

Q. I mean, that is not merely an inference from the Registrar-General's figures, but a further inference from your own experience as a physician?—*A.* Yes. The young woman who marries now practically knows how to set about preventing children, and even so lately as ten years ago they did not know so much. They tell each other.

Q. What do you attribute that to?—*A.* Well, the married friends of the particular young woman tell her. It is often

arranged between the married people before they are married that no children will be born.

Dr. Stevenson. Could you give us any idea of the proportion of cases where couples prevent conception, where the impetus towards that course comes from the husband and where it comes from the wife?—*A.* Oh, I think the wife. I should say there is no doubt about it. But that is generally either when they are first married, or when they have had several children and do not want any more, and then they say the husband is selfish because he will not let them alone.

The Chairman. I suppose you would agree that the adoption of these methods is much more mischievous before children are born than after two or three have been born—I mean, the physical consequences are likely to be worse when these methods are adopted at once after marriage than after two or three children are born? That is what we have been told by others.—*A.* I think if marriage is started by the adoption of these preventive methods, ill health is likely to come on sooner, but I doubt very much whether, after they have had two or three children, and adopt any of these practically more harmful methods, such as withdrawal, there is not much more likelihood of prolapse and those kinds of trouble.

Dr. Stevenson. Just one question on another matter. You told us that in the case of macerated still-births it was found that in 70 or 80 per cent. of such cases the spirochæta could be recovered from them. Is that proportion sufficiently well established to make it a matter of importance to obtain a yearly record of the number of macerated still-births?—*A.* No, I do not think it is yet, but I have been doing my best to get research into these matters conducted all over the country, and there is a feeling, I think, that it has been long neglected and ought to be done, and I think it will be done. I can give you some results of a certain number of examinations that have been made. For instance, Dr. Eardley Holland examined seven macerated children, and he found that six out of the seven contained it. Then of his next eighteen, twelve contained it. Then Dr. Mott was telling me in a letter only yesterday that he had been examining macerated fœtuses lately; I think he said he had examined twenty-six cases, and the spirochæta was found in eighteen of those; but he is going to speak tomorrow night, and will tell us, no doubt. Other men have definitely found it in 84 per cent.

Q. If we had the number of macerated still-births recorded every year, the investigations of the early future might

enable the profession to say what that number meant in terms of syphilitic still-births?—*A.* Yes, but it would not deal with the abortions, which are probably more numerous. That is one of the things we must aim at.

Q. That would be a matter of importance?—*A.* Yes.

Dr. Schofield. With regard to the women to whom you have alluded who for economical or other reasons cannot increase, or do not wish to increase, their families any further, would you or would you not say from your experience that a large number only resort to artificial restriction because abstention is denied them?—*A.* Yes, I think that is so.

Q. It is an important question, I think?—*A.* Yes.

Monsignor Brown. In the pamphlet which was put out by the Neo-Malthusians, and which has been submitted to the Commission, they begin by suggesting as a means of restriction the limitation of intercourse to the intermenstrual period. Is there any authority for that statement?—*A.* There is no doubt whatever that the majority of women conceive either just before or just after the period.

Q. But as a broad statement it may be taken that the risk is small?—*A.* The risk is certainly much smaller.

Q. Would you say there is injury to health in the case of a couple who habitually, as they do in France (*mariage blanc*), have no children at all, and restrict themselves to such a period permanently as a settled arrangement? Would you say there was any injury in that?—*A.* No, I do not think there is, if they do nothing else—if they adopt no other means of prevention.

The Chairman. Do you consider that total abstinence is injurious to the health of either or both married people?—*A.* It would depend very much on the people. Unfortunately it may be injurious to one and not to the other. It depends upon the sexual instinct.

Lady Willoughby. As regards the injury to the mother through limitation—prevention—do you not consider that too frequent, or very frequent, pregnancy is also very injurious to the mother?—*A.* Yes, certainly.

Q. I am talking of the working women, especially the very poor, who, in the country districts particularly, have no knowledge of limitation at all, and in my own experience I see so much suffering caused by the perpetual bearing of children; oftentimes before the woman has done nursing one child she starts another pregnancy?—*A.* It is certainly very bad for them, and often leads to miscarriages, because the uterus has not got reduced to its proper size, and its

lining membrane becomes unhealthy, and that leads to worse trouble.

Q. Would you consider that the use of some mechanical means in such a case would not be justified?—*A.* No, I should say abstention is the proper remedy.

Q. Abstention and nothing but abstention?—*A.* That is what I should recommend.

Q. May I ask one question with regard to abortion. Do you consider that the open sale of drugs advertised for the purpose of abortion should be more rigorously dealt with under the law, or do you think that in the majority of cases they are harmless?—*A.* I think in the majority of cases they are harmless.

Q. You do not think it is a matter of much importance then?—*A.* No, not advertised drugs. The drugs that do the most harm are such things as large doses of iron, and strong purgatives, and diachylon plasters, for instance; there is no doubt about that.

THE CHAIRMAN. Anything containing lead is, of course, very disastrous?—*A.* Anything containing lead or phosphorus.

DR. SCHOFIELD. It has been said that intercourse during pregnancy leads to abortion, or may lead to abortion.—*A.* My own opinion is that provided intercourse is not conducted at the time when the period would be coming, there is no risk as regards abortion.

Q. And it should be left to the wife?—*A.* It should be left to the wife to decide.

Q. On the ground that it is physically beneficial, or what?—*A.* For this reason. I am old enough to have watched cases, and this is my opinion—that if the woman during pregnancy has no sexual desire she had better be left alone, but if she is wanting it all the time (and every now and then you come across such cases) and does not get it, she is in a state of unrest, especially sexual unrest, the whole time; and I have seen the results in the children, children whom I have seen grow up with a very strong sexual tendency. I have made a note of a few cases of that sort, where the woman during her pregnancy has had an exaggerated sexual tendency or instinct which has not been satisfied, and the children were more or less inclined to go to the dogs. A pregnant woman should be a satisfied woman, and mentally at rest.

Q. You said she ought to have the choice?—*A.* If she had a distinct objection to it—and a good many pregnant women do have strong views on this, it would be more or less cruelty for the husband to approach her.

Q. But it would not lead to physical abortion or other trouble?—*A.* No, I do not think so.

Dr. Savill. Do you not think some of the prejudicial effects that have been attributed to the use of preventives are probably due to the fact that the use of preventives leads people to more frequent indulgence in intercourse than would be the case normally?—*A.* Yes, if they were secure in their method they would probably do it more often.

Q. And if used very seldom, as rarely as once a month or once in two months, would the use of these preventives have the same injurious effects?—*A.* No, certainly not.

Q. Then have you found that the effect of the social work of the husband, if he is very much of the student type, affects the sexual instinct considerably—that he is less sexual?—*A.* Yes, there is no doubt about that; if a man is mentally occupied and mentally absorbed, he seems to forget that side of the married life.

Q. Because it is often stated that the education of the wife makes her asexual, and I wanted to get your opinion as to whether this factor affected the man also.

Dr. Fremantle. Do you confine yourself entirely to the question of memory? You said that mental occupation makes a man forgetful of that side of life; do you mean it only has that effect because it displaces other ideas in his mind?—*A.* Well, I do not know quite why it is, but a very artistic-minded man, and a very mentally absorbed man, who comes up late to bed, and thinks as long as he is awake, and thinks the first thing in the morning, does not care for the sexual part of life; it rather prevents the absorption of his intellect, I think.

Dr. Savill. So that much of the childlessness of the educated woman may be due really to a practically celibate marriage for years, because of the husband's wish?—*A.* I do not know that I have ever thought of men as being more mentally absorbed now than they used to be.

Q. No, but I think attention has been drawn recently to the fact that the mental education of women has come into vogue of late years, and it is said that women so educated are more childless than ordinary women, and therefore it may be due to the fact that she tends to marry the more student type of man, and that he and she being wrapped up in different kinds, or perhaps in the same kind, of work, lead a more or less celibate life, and it is very usual for them to have a lifetime of (practically) voluntary abstention?—*A.* Of course, if the man has those views and the woman has not, it is an unhappy condition.

Monsignor Brown. Do you not get rather notable exceptions to that?

Dr. Savill. Of course you do—every individual differs—but I want to controvert the ordinary general opinion that education asexualises a woman.

Dr. Fremantle. Arising out of that, Dr. Routh, your remarks with regard to the man would apply equally to the woman, would they not?—*A.* Certainly. I was not asked about the women. Certainly it is the case.

Dr. Ettie Sayer. Then the intellectualization of the race would lead of itself to the decrease of the birth-rate?—*A.* Yes, if it was an intellectualism which was all-absorbing.

The Chairman. Supposing a doctor had recommended that the wife should not have a child for three years, would a clergyman be safe to recommend total abstinence as being not likely to hurt either of them?—*A.* Yes; and if they cannot abstain altogether they have to adopt some other method. Sir George Savage recommends that in those cases sheaths should be worn by the man, as being less likely to do harm.

Q. Supposing the man were to say, "It would be injurious to my health: would it not be better for my health to use some of these methods?" Do you consider total abstinence would not be injurious to either party?—*A.* As a rule. Total abstinence is felt for the first few weeks; after that it is endured quite easily, in the ordinary run, by both sexes. But there are cases where it quite definitely does harm; that is in the case of people who are hyperæsthetic from those points of view.

Dr. Fremantle. You do not think that a very large amount of modern neurasthenia and suchlike ailments do come from suppressed sexualism?—*A.* I think a certain amount does, as well as from excess; the two both do it. I have not come across any case of neurasthenia due to abstinence; I should be rather doubtful about it. It is the repetition of incomplete acts which upsets the nervous system—or excess—sexual abuse in any form.

Q. Only, I have had a controversy in the medical press with a surgeon in India who has been taking the opposite line, and saying that abstention was most prejudicial. But I think he was speaking chiefly from the male point of view, and on that I take it you are not giving evidence?—*A.* No. I really do not know much about that.

Q. Except from the female point of view you have not much evidence to give us?—*A.* No.

Dr. Schofield. Have you not met with cases in which

neurasthenia or psychasthenia in unmarried women has had a sexual origin?—*A.* I would not like to say I have not. If an unmarried woman has very strong sexual feelings, she would be likely to suffer in that way.

Q. You agree that it may be a cause of neurasthenia and psychasthenia in such cases, and I am sorry to say I do not think it is a very infrequent cause?—*A.* I have seen cases of that sort, in some instances associated with masturbation, in other cases associated with a love affair gone wrong, but whether it is ever solely due to unsatisfied sexual instinct I do not know.

Dr. Fremantle. You spoke just now about the possibility of excess as well as abstention giving rise to trouble. That leads me to ask you this question: Do you think that sexual abuses before married life have any bearing on sterility?—*A.* Are you speaking of women?

Q. Yes—unnatural practices?—*A.* I have seen a good many cases of masturbation in girls, either solitary or with companions, in which not only do extremely nervous symptoms come on, with loss of memory and inability to concentrate, but also a good deal of leucorrhœa.

Q. It very often clears up as a result of marriage, but you would not think it was a factor of much importance in those cases?—*A.* If it has gone on long, it very often leads to prolapse and retroversion because of the orgasm forcing things down; a happy sexual marriage would relieve her.

Q. One of your proposals is that women should be supervised during pregnancy. I did not quite catch what your suggestion was: did you suggest that pregnancy should be compulsorily notified?—*A.* No, I did not. I think it ought to be voluntarily notifiable, and I was holding out inducements to get women to do that voluntarily, because otherwise poor women cannot get medical supervision.

Q. Then you say that the administration of maternity benefits might be transferred from the approved societies to the local health authorities. I suppose when you speak of "health authorities" you are speaking generally, without any discrimination?—*A.* I was speaking more of the medical officer of health.

Q. There are, of course, different medical officers of health. I was wondering whether you had more preference for the medical officer of health of the district, rather than for the medical officer of health of the county council, who has the administration of the Midwives Act. I take it that your remark regarding the local government authority would include either the county or the district authority?—

A. I thought the medical officers would be both for counties and county boroughs.

Q. They would be for counties or county boroughs. In speaking generally of "local authorities" some people would not include these; but you were not, I take it, alluding to district councils but rather to county or county borough councils?—*A.* Yes.

Q. One last point. You suggested that it would require more laboratory accommodation, and that in the case of abortions the fœtus should be sent for examination to the nearest laboratory. Now in any suggestion of that sort would you agree that to send it merely to a laboratory as such would be useless unless the laboratory were sufficiently well equipped and staffed to deal with it?—*A.* I quite realize that it could not be done as things are at present, when there is no pathological expert available for the medical officer of health at all; and therefore I propose in my paper that the large towns nearest to these districts should have laboratories where this sort of research is done. Because unfortunately, some women who give birth to syphilitic children may yield a negative Wassermann reaction during pregnancy. Many of these negative cases have no clinical evidences of syphilis, and it would prevent salvarsan being used if a negative reaction was given in those cases; but if you examined the fœtus and found spirochætes, it would be a definite proof that that woman must be put under antisyphilitic treatment.

Q. But in order to make your proposal effective, I wanted to get some idea what kind of staff would be required for the laboratory—that is, how big a staff would be required to run such a laboratory. What kind of person do you think would be necessary, having regard to his having to give reports on abortions and still-births sent there?—*A.* Supposing such an establishment was going to be set up in London, we should first of all have an obstetrical physician, who is also more or less of a pathologist; we should also want a pathologist who either is a bacteriologist himself or has one at his disposal; and facilities would have to be made so that if spirochætes were found, the woman should be followed up and seen and brought to the hospital to have the proper treatment, and the husband too, if necessary.

Q. That is so for London, but for smaller provincial towns, the smallest which you contemplate would be feasible, what is the smallest staff you think practicable in a provincial town worth establishing this arrangement for?—*A.* Well, spirochætes can be found quite easily in the liver of a mace-

rated fœtus; it wants a little special attention to find them, but if students were really taught ante-natal pathology—which they are not now, and which we think they should be—that would become quite easy in the future, and with the assistance of the pathological assistant, or somebody versed in pathology, they would be able to diagnose syphilis in that particular dead child.

Q. Oh, then you rather require a skilled pathologist?—*A.* More or less skilled, yes.

Q. It must not be simply a medical officer of health who has merely been through a short course?—*A.* It would depend on the number of cases he had. If he had half a dozen macerated fœtuses sent in in one week, of course he could not do it. But the mere cutting of a section from the liver of a macerated fœtus, and examining it, after staining, under the microscope, could be done by the laboratory boy, as far as that goes; he would get very expert after a bit and would spot it as well as anybody else. Of course the pathologist would need to confirm the presence of the spirochæte.

Q. I was thinking of the experience required to construe whatever was found?—*A.* Of course the medical officer of health would, with a little experience, be able to identify the spirochæte, but it would be better, until there can be a proper staff everywhere, to have it sent to the nearest laboratory.

Q. As long as you have a fairly skilled medical officer of health and a skilled laboratory boy, you really do not want more, although you would prefer to have a clinical gynæcologist as well?—*A.* It is not only of syphilis I am speaking. So far I have been speaking rather from the point of view of a syphilitic child, but supposing a woman had a still-birth, and no spirochætes could be found, then you would want to go a little farther than that, and you would want some one much more skilled than the laboratory boy. I was merely saying that the laboratory boy could be given a piece of liver to be cut into sections and stain for examination.

Q. But you might have a skilled gynæcologist?—*A.* But he would not be a pathologist necessarily. If you are going to have more than mere examination for spirochætes, you want a skilled pathologist, and a gynæcologist perhaps to clinically examine the woman.

Q. It is in your opinion necessary, for these reasons, that the medical curriculum should pay considerably greater attention than at present to ante-natal pathology?—*A.* Yes, to ante-natal hygiene and pathology.

The Witness withdrew.

Meeting.—April 29, 1914.

Chairman.—Dr. A. Newsholme, Principal Medical Officer Local Government Board.

Witness examined.—Dr. Mary Scharlieb.

The Chairman. Your first point, Dr. Scharlieb, is the proportion of your married patients who have children, arranged according to age.—*A.* I think the most prolific age is somewhere about between 26 and 30. Although we find that women between 31 and 35 have an absolutely greater number, yet I think the greatest number of first children are born when the mothers are somewhere about the age of 25. I drew up a table based on a consideration of 1000 cases taken from the case book consecutively. At the age of 25 and under the numbers were, with children, 12; without children, 19. Between 26 and 30, with children 25; without, 32. Between 31 and 35, with children, 59; without, 38. Between 36 and 40, with children, 52; without, 27. From age 41 to age 45, the numbers are 44 with children, as against 23 childless; ages 46 to 50, 38 as against 10; ages 51 to 60, 60 as against 7; and over 60 the numbers are 36 as against 4.

Q. It appears to me that of the women aged 51 to 60 a very much smaller proportion are childless than in the case of the younger ones—only 7 out of 60?—*A.* Yes.

Q. Is it not necessary to know the duration of marriage among those who are childless?—*A.* Of those married two years and under, the numbers are: with children, 17; without, 47; between two and five years, 24 with children, 33 without; between six and ten years, 60 with children, 32 without. Of those married 11 to 15 years, 47 with children, 26 without; of those married 16 to 20 years, 45 with children, 8 without; and of those married over 20 years, 129 with children, and only 12 without.

Q. So that of those married between 16 and 20 years, only about one-sixth had no children; while of those who had been married six to ten years, rather over one-half had no children?—*A.* Yes. That, I think, is explained by their not wishing for children at first, economic conditions being a handicap. But these women were not poor.

Q. They were women you met in your private practice?—*A.* Private practice entirely. They were either fairly

well-to-do people or people of the middle classes, and those sort of people are very apt to be ambitious for their children, and to abstain during the early years of married life in order to have more money to educate the children when they come.

Q. Then those who have been married two to five years.—*A.* There were 57 of those, and out of the 57, 33 were childless.

Mr. Heape. All these tables, I take it, refer to your patients?—*A.* Yes.

Q. Do you imagine that they afford any ground for supposing that that is the usual condition of things?—*A.* I hope not.

The Chairman. Have you any idea what proportion of those 158 childless women came to you by reason of their childlessness?—*A.* Some, for instance, would come immediately after having had a pregnancy, but no live child; they would come to ask whether it was possible for them to have living children. Then wives would come suffering from some internal disorder, or wives with a tendency to consumption.

Q. Perhaps you could give us some idea as to the proportions obtaining between the different causes of childlessness?—*A.* Out of 160 women, 44 who had not been married more than two years were childless. That rather looks as though they had not wished for children immediately. Nineteen had had a pregnancy, but no live child.

Q. I take it that under that second heading the usual causes of still-birth would have come in—possibly more particularly syphilis?—*A.* Yes, and also it is undoubted that the first labour is the most toilsome and difficult, and unless the woman chances to be in very experienced hands she runs the risk of losing the first child.

Q. The first child is much more frequently born dead than later ones?—*A.* Yes; even when there is no mechanical disproportion between the pelvis and the child, the long delay often attendant upon a first birth handicaps the child severely. A great many first children, too, are born with the aid of forceps, and I think that unless this is carefully done it tends to result in still-births.

Q. And to deaths within the first forty-eight hours?—*A.* Yes, quite so.

Q. With regard to the question of "Childlessness not intentional, but no cause assigned," I take it that was not the reason of the consultation with you; the consultation was about something else, and that incidentally arose?—*A.* Yes. I have always asked the woman what was the

cause of her childlessness, and whether she thought the husband was delicate, to try and ascertain whether the reason was with him.

Q. Then as to refusal to have children—you say 7 out of 160 were childless for that reason?—*A.* Yes.

Q. That makes a percentage of only 4 per cent., or thereabouts?—*A.* Yes, it is quite small.

Q. But very likely that is an under-statement; some of the others might come in the same group in reality?—*A.* Yes.

Q. We might now go on to the consideration of the causes of childlessness. The first class of cases were what you describe as "involuntary" causes, having relation to the health of the husband or wife. Have you any special expansion to give us on that point?—*A.* Well, taking first the husband, there are certain disorders that prevent him from being fertile.

Q. You are well aware that gonorrhœa is one of the common ones?—*A.* Yes.

Q. Gonorrhœa previous to marriage is a very common cause indeed of sterility in the husband?—*A.* Yes.

Q. Would you think it one of the most common?—*A.* I should think so.

Q. I suppose that as far as gonorrhœa is concerned, in the vast majority of cases the wife has no suspicion, because it might be that the disease might be cured and yet might have resulted in the sterility of the husband?—*A.* Quite so.

Q. Then gonorrhœa is a cause of sterility in the wife, not only because of the old disease of the husband, but also because of the infection of the wife through the tubes. I believe that is also very common?—*A.* Very common; there are a great many such cases. I have known many cases of women who have had some inflammatory disease of the pelvis which entirely precluded all expectation of children.

Q. Turning from gonorrhœa to syphilis, that again is a cause of childlessness, but in a different way from gonorrhœa; it does not cause childlessness exactly, strictly so-called, but it leads to babies being born dead, or to early miscarriages. We are both of us familiar with the figures in regard to this matter in another connection: can you give us any idea as to the proportion of still-births probably due to syphilis?—*A.* No, because my practice is entirely amongst women, and women up to the present time have had very little realization of this matter.

Q. At what period does still-birth usually occur, when the

cause of still-birth is syphilis?—*A.* I think a great many early miscarriages are due to it, and also to a still greater extent premature births—at five, six, and seven months; syphilis is also a frequent cause of the death of infants during the first weeks of life.

Q. I would like to ask one question, because it does bear on the question of the birth-rate very markedly—as to whether you would be in favour of any system of certification of the husband's health before marriage?—*A.* I think that the time will come, and that it is not so very far off, when certificates of health will be exchanged by the bride and bridegroom. I think a girl's father has a perfect right to ask for a certificate of health, and if I were a young man about to marry, I should require a certificate of health from the bride.

Q. Would you like to make it a statutory requirement, or leave it to public opinion to develop?—*A.* Oh, if we leave the matter to public opinion, I think it will develop quite quickly. People take an enormous interest in this matter now.

Q. Would not a declaration by a man to the Registrar, short of compulsory medical certificate, go far to make people pause before marrying under false pretences?—*A.* Yes, I think it would, and it might even be more far-reaching, granting honesty on the part of the man.

Mr. Heape. I should have thought that the fact that the marriage might be rendered void if a man made a wrong declaration would be sufficient to deter him from doing so.

The Chairman. A declaration might be perfectly good so far as danger of disease to the wife is concerned, but not as far as the prospect of having a family is concerned. A particular declaration might be perfectly good from the point of view of freedom from disease, but still the marriage might prove a sterile one.

Dr. Fremantle. Therefore would you suggest that this should be a declaration as regards previous illness, or as regards sterility?—*A.* I think that the would-be husband should be required to declare whether or no he has ever suffered from gonorrhœa or syphilis.

Rev. J. Marchant. Would you have a penalty attached?—*A.* Yes. A woman should be able to sue for nullity if a man marries her under false pretences—marries her as the possible father of her children, knowing he is not likely to be a father. That should be a ground for nullity.

Dr. Savill. Is the declaration going to be prohibitive of marriage? Is it to be that they must make a declaration,

and if they say they are diseased then they cannot marry?—*A.* Can we settle that? I do not think that is for us to settle.

Mrs. Bramwell Booth. We are not settling it, but we are going to make recommendations—so that it ought to be considered?—*A.* Well, for the sake of the nation I think that the confession of such disease should prevent a person from marrying.

The Chairman. There are two kinds of case to be considered in this connection. There is first of all the case of old gonorrhœa, with no present disease or likelihood of disease. That is one case. Then another case is that of the man who has, or has had, syphilis, and is likely to have syphilitic children. In the second case it will be much more important to prohibit marriage until the man is cured.

Mr. Heape. How would you propose to prevent marriages where they were undesirable?—*A.* By educating public opinion.

Q. But if the man and woman both know, and, thinking perhaps the risk, if risk there be, is infinitesimal, determine to run that risk, are you going to make it penal?—*A.* I suppose such a course of action is Utopian.

Q. But is it wise for us to make a suggestion or a recommendation which is Utopian?—*A.* No, but I think that if these diseases are to be exterminated, or even very greatly minimized, it will be necessary to make it penal knowingly to communicate them.

The Chairman. Dealing now with Abstention and Preventives. Perhaps it would be convenient if at this point you would tell us in what proportion childlessness, in your opinion, is due, or small families are due, to voluntary causes as compared with involuntary?—*A.* I think in a great many cases it is voluntary.

Q. The birth-rate has gone down from somewhere in the 30's to low down in the 20's: what percentage of this decrease would you consider due to voluntary causes? Would you say 7 per cent., 20 per cent., 90 per cent., or what?—*A.* I think 50 per cent. is due to voluntary causes.

Q. Your opinion is specially valuable on this point, and I would like to clear up this. Did you mean that in your experience of the cases which are here set out probably half the childlessness was due to voluntary causes, or are you making a wider statement about the population in general?—*A.* I think about the population in general, because, of course, women who are in perfect health often talk to me about it, and they often tell me they do not

intend to have children, or they cannot afford to have children, or it is inconvenient to have children.

Q. May I put it in this way: that if only 50 per cent. of the reduction in the birth-rate is due to voluntary causes, then some of the involuntary causes, like gonorrhœa and syphilis, must have very greatly increased. Is that likely?—*A.* No; it is contrary to the evidence we have had before us.

Q. Then if gonorrhœa, and syphilis, and the other involuntary causes of childlessness, have not increased, it is highly probable that more than 50 per cent. of the cases are due to voluntary causes?—*A.* I quite agree.

Mr. Heape. We are getting figures which indicate very strongly that there is a decreased capacity rate—a decreased fertility rate—quite apart from checks, and quite apart from disease: is not that so?—*A.* Yes.

The Chairman. Is there any evidence of a diminished capacity for child-bearing, in your opinion?—*A.* Yes, I think there is. At any rate people apparently healthy, and people who do not admit that they do anything to prevent child-bearing, have either no families or small families. That looks like decreased fertility.

Q. Does not that come within your category of being ashamed of admitting the use of voluntary measures?—*A.* Perhaps so.

Mrs. Morgan. Do not these cases that come to you to know why they have no children go to show an anxiety on the part of these women to have children?—*A.* Men in a great many cases abstain during the first few years of marriage, and then, when they are most anxious to have children, they cannot. I cannot explain it except by assuming that it is the result of thwarting nature. They are quite capable when first married, but in consequence of persistently thwarting nature they become incapable.

Q. Then you think those who come to you anxious to have children have in the first instance abstained from having children?—*A.* Yes.

Q. And has the number increased of those who come to you anxious to have children, as compared with the earlier years of your practice?—*A.* I think so.

Q. Showing that there is a larger percentage to-day who are childless than was the case years ago?—*A.* I think so.

Mr. Heape. I understand that all the figures you have given us relate simply to patients of yours, and not representative of the population as a whole?—*A.* Exactly.

Q. I find that of those patients "with children," most

come to you between the ages of thirty-one and forty, and fifty-one and sixty?—*A.* Yes.

Q. Whereas those who are childless come to you mostly between twenty-six and thirty-five. Why do patients with children not come to you until thirty-one?—*A.* I take it it is because those who have children are healthier.

Q. You mean to suggest that women who have children are healthier up to the age of thirty?—*A.* Yes.

Q. The women who come to you without children are in a very much larger proportion between twenty-six and thirty-five: is not that so?—*A.* Yes. I think many come either because they are childless or because there is some condition which is likely to render them childless.

Q. They do not come because they are ill, but because they are childless?—*A.* Very many come because they are childless.

Mrs. Bramwell Booth. I take it none of those patients are ordinary accouchement patients—you would not reckon those as patients, I suppose?—*A.* No, I have given up accouchement cases for the last twenty years.

Dr. Savill. Would you say that voluntary abstention is more common now than it used to be?—*A.* I could not tell you, because I look out for it now much more keenly than I used to do. But the experience that we have had before us in the other Commission is that gonorrhœa is less frequent than it was.

Mrs. Bramwell Booth. People who specially wish not to have children often use certain instruments?—*A.* I do not find amongst my patients that there is much use of pessaries. When I can get women to confess, it generally is either that they use a douche, such, for instance, as a fairly strong solution of alum, or else it is that the husband wears a sheath. Those are the two methods I find practised.

Q. You do not think much good could be accomplished by putting any penalty upon the sale of these things?—*A.* Well, it would be a very good thing, indeed, to prohibit the sale—but would it be effectual? There would always be a clandestine trade in such things. I think we must try to educate the conscience of the nation—try to make them understand that they are committing racial suicide—try to make them willing to have children.

Q. Do you think it would be useful, at any rate, to forbid the advertising of such things?—*A.* Certainly; by all means.

Dr. Fremantle. Involuntary sterility, you say, is often due to the use of preventives. Would you say that

the use of douches gives rise to sterility?—*A.* No. Physical injury is rare.

Mr. Heape. I think you said that failure to bear children followed abstention—not necessarily the use of checks, but any abstention?—*A.* Any abstention.

Q. Because, in your opinion, of the thwarting of nature?—*A.* I think so. I cannot explain it in the least, but I suppose there is some influence on the nervous system.

Q. It is certainly the case with animals: if you prevent animals from breeding they degenerate?—*A.* That is apparently what it is.

The Chairman. Now we will take the Effects of Prevention. Are you of opinion that injury does result from the use of these preventives?—*A.* No physical injury. In the majority of cases they cannot do physical harm to any one. From the use by the wife of a douche or a quinine pessary, or from the use by the husband of a sheath, I do not see that any physical injury results, but I am sure there are recondite effects upon the nervous system.

Q. Having regard to hysteria and allied diseases, would you not agree that although physical injury may not be present, yet nevertheless serious injury does arise?—*A.* Certainly. May I guard myself from appearing to say what I do not mean to say? I think that as long as a man is single, or as long as a woman is single, not the slightest harm is done by continence. On the contrary, it is a perfectly right state, and in my opinion no harm is done in such cases. But directly a couple are living together in the intimacy of marriage, abstention appears to have a very deleterious effect.

Q. And you say that of abstention generally, apart from any physiological methods which may be adopted?—*A.* Yes, such as douches, pessaries, mechanical contrivances, and so on.

Q. Have you come across many cases in your practice in which women have apparently become nervous wrecks, apparently from this cause?—*A.* Oh, yes, apparently; and especially women between say forty and fifty.

Q. Have you much doubt as to the casual relationship between the two things? Is it not difficult to make the patient realize that there is a connection?—*A.* Very difficult. It is only the doctors who might perhaps attribute the hysteria to that cause. The patient herself does not connect her hysteria at forty or fifty years of age with abstention at an earlier period of life.

Dr. Florence Willey. What would you think, if the

health of the woman only is considered, is the best interval between one child-bearing and another?—*A.* Matthews Duncan always said that about two years was the proper interval. That would be, of course, nine months gestation, nine months lactation, and six months to nine months rest. That was his idea.

Q. What methods do you think is best to advocate during that six months rest? Would you advocate complete abstention?—*A.* Do you not think that if everything is perfectly normal the intervals between the births go on increasing? At first the woman may have a child every two years; by and by it becomes every three or four years, and gradually child-bearing ceases.

Q. I think there are a great many women who have a child nearly every year?—*A.* There are some, but they are rather abnormal. I do not think that is often so with the woman who suckles her child, as she should do; it mostly occurs with women who do not suckle their children.

Q. I should like to hear your idea as to the methods that should be adopted during the period of rest?—*A.* The couple should abstain for a few months. There is no harm whatever in that; it is the prolonged abstention, extending over years, that does harm.

Dr. Fremantle. You allow, of course, six months for suckling and nine months for gestation?—*A.* Yes, but there is no necessity whatever to abstain during gestation and lactation—no reason whatever.

The Chairman. Is it not a rare phenomenon for a woman to become pregnant during lactation?—*A.* Comparatively rare; a small percentage of such cases occur.

Dr. Florence Willey. Do you not find some cases where women using means of prevention have been told by doctors that they ought not to have more children?—*A.* There are some doctors foolish enough to tell them that.

Q. Do you find among your patients the majority of women who use preventives use them voluntarily, desiring to do so?—*A.* I think very often both they and their husbands think it would be inconvenient, or expensive, or something of that sort, to have children.

Q. You do not think they themselves desire not to have children?—*A.* Some of them have no desire; I have often asked them.

The Chairman. In the cases where the woman has been a willing participator, have you come across any instances of bad nervous results?—*A.* I think the mere fact of having

thwarted nature has some recondite effect. I cannot explain it, but I believe it exists.

Q. But you would agree that it is extremely difficult to distinguish between the results of this particular thwarting of nature and the collateral circumstances of these people's lives?—*A.* Yes, the whole inquiry is a very difficult one. Probably we shall all be in a position to give better and more reliable evidence after another two or three years, now that attention is being drawn to the matter.

Dr. Fremantle. You have spoken of prevention at the desire of the husband, against the wife's will, perhaps. Have you had any instances of prevention by the wife, without the knowledge or against the will of the husband?—*A.* Yes.

The Chairman. Would you like to answer a few questions as to the measures you would suggest for arresting the decline of the birth-rate? First of all, do you regard it as desirable to arrest the decline of the birth-rate?—*A.* Certainly.

Q. What measures would you be inclined to suggest to that end?—*A.* I would suggest that we endeavour to improve the health of the nation by the extermination or diminution of syphilis, gonorrhœa, tuberculosis, and so forth; also that we should educate the conscience of the nation, and get a well-informed public opinion, so that men and women should aim not only at their own selfish pleasure (I am not using the word "selfish" in a very unkind sense, I will say their own private pleasure), but at the welfare of the nation.

Q. Are you hopeful of any effect from altruistic teaching in the interest of the nation which runs counter to the pecuniary interest of the family?—*A.* It is very difficult to answer that. The whole nation wants a bath of physiological righteousness. We are not doing our duty.

Q. Is not the likelihood that this is the kind of thing which will be said: "I have special reasons for wanting to save; I have only a small income, and I want to send my boy to the University"—and that we shall all leave it to our neighbours to adopt this altruistic policy?—*A.* The truth is we are selfish from top to bottom, the whole nation.

The Witness withdrew.

Witness examined.—Miss Martin.

The Chairman. I think you are prepared to give evidence as to the amount of restriction actually going on among

working women?—*A.* Yes. I have been working for about eight or nine years in Selly Oak, near Birmingham, which has a population of about 25,000. In order to help the working women I had midwifery training and took my C.M.B. Certificate. We began at Selly Oak in a cottage, and during seven years 700 women have passed through our books. All that I state is what I have heard in a quite friendly way from women who trust me.

Q. The people you come in touch with are of the labouring class?—*A.* Yes; a certain number of the artisan class, but only a small proportion. The greater number are labouring people in the iron works, metal works, and cycle works, and their wages are very uncertain. I am also in touch with the improvident classes, whom I reach through the better women.

Q. You say that preventive measures seem to be known by the better class of working people, but the knowledge has not yet penetrated down to the labouring classes?—*A.* In our neighbourhood they make pessaries with cocoa butter and quinine. But that is not so much done among the women I meet, as by the wives of the well-to-do men in the factories.

Q. Are other preventive means employed?—*A.* That is the only one I know of. The labouring women among whom I work do it by bringing on miscarriages.

Q. What are the methods used in producing abortion—diachylon pills?—*A.* Yes, they get the diachylon from a diachylon plaster and swallow it; that is one thing. Also they boil down copper coins and swallow the liquor; and this has brought on some very bad cases of illness. Then they take quinine crystals to a very great extent; that is the present fashion. And some take quantities of salts.

Q. With regard to abortion in general, is it very commonly adopted by working-class people in this district?—*A.* No, I do not think so.

Q. The large families, you say, occur mostly in the labouring classes, below the poverty line. Do you think it is likely that in the early future these measures will spread down to them?—*A.* I do not think they will, to the very ignorant and hand-to-mouth people.

Q. I take it the better class of working people adopt them because they know of them?—*A.* Yes.

Q. It is not because of extreme poverty, is it?—*A.* No, it is because they want to do better for their children than they have done themselves. They wish only to have two or three children, in order that they may take advantage

of the new educational facilities, and that they may have a better time than they have had themselves. They like having children.

Q. Do you not think the same motives hold good in some of these labouring people below the poverty line?—*A.* Yes, in a great many cases.

Q. If that be so, it is merely a matter of a few years before these people below the poverty line will begin to adopt these measures?—*A.* That is my opinion.

Q. And they will rise above, or on to, the poverty line?—*A.* Yes, more of them.

Q. You are strongly of opinion that the use of preventive measures is increasing?—*A.* Yes.

Q. Do you know what the actual figures of the birth-rate are in this centre of yours?—*A.* Last year I was only able to get it for three quarters in regard to our Selly Oak Ward; first quarter, 24·8; third quarter, 28·4; and fourth quarter, 28·4.

Q. So that it is still fairly high as compared with many districts?—*A.* It is a little higher than the whole of Birmingham.

Q. So that although the birth-rate is fairly high for recent years, that birth-rate is associated with the large use of preventive measures—the considerable use of preventive measures?—*A.* Considerable use, yes.

Q. Do they find difficulty in getting houses when they have large families?—*A.* Yes, it is almost impossible to get houses; the landlords object entirely to large families, and they refuse to let them have houses.

Q. What is the usual size of the houses?—*A.* Five rooms.

Q. That means three bedrooms; three bedrooms would allow for a fair-sized family?—*A.* But the better houses are all 6*s.* and 6*s.* 6*d.* a week with us.

Q. You mean the five-roomed houses?—*A.* Yes, but there are a large number of houses with only two bedrooms, and also back-to-back houses. Some of those can be had at as low as 3*s.* 6*d.* and 4*s.* a week.

Q. What are the average wages of the unskilled labourers in your district?—*A.* Twenty-two and twenty-three shillings.

Q. And in order to get three bedrooms a six-children family would have to pay how much?—*A.* Six shillings at least. The rate of wages has been raised lately; up to two years ago it was 18*s.*

Q. Do the children earn much?—*A.* They used to, but not so much now, and this again makes them more determined not to have children.

Mr. Hobson. Do many married women go out to work?—*A.* A great many do enamel work and cycle trade work, and that again makes it difficult, because in the enamel works a very large amount of lead is used, and I find that the women who work there do have miscarriages and delicate children.

The Chairman. Has that been investigated by the Home Office?—*A.* Oh, yes, and they look after things a great deal better than they did. They have a doctor there, and they are given milk and different things.

Mrs. Bramwell Booth. Is it not a fact that even where they can pay the 6*s.* a week, the landlords object to large families?—*A.* Yes.

The Chairman. The house gets knocked about more, of course, where there are many children.

Mrs. Bramwell Booth. I think this housing question is a very serious question, from the point of view of its influence on the birth-rate.

Lady Willoughby de Broke. As regards the effects of drugs, how do the women get to know about these drugs?—*A.* From each other.

Q. Those things which are advertised, and of which we see leaflets distributed from house to house, are harmless as a rule?—*A.* I think so; they are purgatives. Our leading doctor told me the same thing; he said that really there was nothing in them.

Q. These drugs which you mentioned, such as boiling down copper coins and drinking the liquid, are used to produce abortion?—*A.* Oh, yes, and bitter apple is used too.

Q. What do you consider is the effect upon the health of the women?—*A.* Permanently serious.

Dr. Savill. Would you advocate some teaching of sex hygiene in the schools there as likely to be productive of good?—*A.* I advocate it more in our schools for mothers, and getting men and women to have a different attitude towards the sex question altogether, and try and get them to instruct their children. It is very difficult in the schools in a neighbourhood like ours. They attempted it a few months ago in one of the lowest schools, and it was very disastrous. I think it depends a little upon whether the neighbourhood is ready, whether the school is ready, and upon the teachers who do it.

Q. You think that would help the whole problem immeasurably?—*A.* Certainly I do.

Mr. Hobson. With regard to the sharp distinction which you drew at the beginning between preventives used

by mechanics' wives, and the methods of abortion practised by the labouring population, would you say it would be a great advantage to the labouring people if they substituted preventives for abortion? Would it be advantageous, speaking from the standpoint of health, and the good of the community, if the use of preventives were substituted for the methods of procuring abortion which you say at present are used among the labouring class?—*A.* I think it would have a very bad moral effect, because they would go on feeling that they could indulge themselves without any responsibility.

Q. Do you seriously look forward to the probability of any amount of moral control being substituted for the use of preventives?—*A.* That is what I am hoping and working for.

Dr. Florence Willey. Would you take two illustrative families, and compare them? Take the case of a woman having a child every year, as is so common in the class you have been telling us about, and compare her condition of health with that of the woman who uses preventives. Thinking of those two groups of people, what is your general impression of the difference in their health?—*A.* I can speak better as to the women who have brought on abortion or miscarriage than of women who have used preventive measures. The working people have used measures for bringing on abortion and miscarriage, and among those women I can think of a number who have really wrecked their health by doing that. On the other hand, I have with me a list of twelve or fourteen women who have large families of children, and who are in very good health indeed.

Q. And who are of the same class?—*A.* Of the same class exactly.

The Witness withdrew.

Witness examined.—Mrs. Ring.

The Chairman. What is your exact position, may I ask—your work?—*A.* I have done a good deal of investigation—social investigation of all kinds. I am on the Industrial Law Committee, and on the Women's Industrial Council. I have also done a certain amount of hospital work, and work in connection with schools for mothers. And I have a good deal of knowledge about the conditions obtaining among women of the labouring class, but of a much poorer class than that to which the last witness has referred.

Q. What have to you say about the influence of work on

population?—*A.* In Birmingham, from which town I come, a great deal of brass-polishing is done, and a great deal of lead, or some injurious metal, is used in that work, which the brass polishers themselves say is a very great cause of miscarriage.

Q. And the women themselves are engaged in this brass polishing?—*A.* Yes, but it is also considered that the effect upon the fathers is injurious with regard to their fertility. There are many women working also in the enamel works, and, in fact, all metal work seems to have a deleterious effect upon the women, both as regards their motherhood and as regards their moral character. And I have seen a certain amount of the results of lead poisoning in the Potteries.

Dr. Fremantle. May I ask for an explanation of that particular point—as to the moral effect of the metal works?—*A.* I cannot explain it except by saying that it is very dirty and very badly-paid work. There are women doing severe physical work—and there are hundreds and hundreds of women working the presses who when they marry make bad mothers from the point of view of having children. Some of the presses are very heavy, and they are continually reaching up to them.

The Chairman. The next point is the influence of poverty. Is your experience the same as the general experience—that the greater the poverty the higher the birth-rate?—*A.* Well, the higher the birth-rate, but not the higher birth-rate of the right kind of children, children that live and are brought up.

Q. Speaking generally, it is a fact, I take it, that the unskilled labourer has a bigger family than the artisan: is that your experience?—*A.* Yes, but they do not live.

Q. On the question of housing, how does that bear on the birth-rate?—*A.* Well, both the housing conditions and the poverty make the parents try to have fewer children.

Q. Then as to alcoholism: how would you relate that to the birth-rate?—*A.* I think it lessens the fertility of the woman.

Q. You are now speaking of the effects of alcoholism on the woman herself?—*A.* Yes, and it is the only thing that does destroy her pride in her children.

Q. Have you come across anything indicating bad health in the children of alcoholic mothers?—*A.* Oh, yes, feeble-mindedness, epilepsy, and the general smallness of the child, and its incapacity to grow and develop. The children of chronic alcoholic people are very undersized.

Q. I gather that the question upon which you particularly

desire to give evidence is as to the extent to which methods of procuring abortion are practised?—*A.* Abortion is practised amongst the very poor, and prevention amongst the better-class people.

Q. You confirm the last witness in that respect?—*A.* Yes; the poorer people cannot afford the better methods of prevention, such things as syringes, and oil, and quinine and so on.

Q. But is it not a fact that the drugs which they have to buy for the purpose of procuring abortion are more expensive?—*A.* They use diachylon, and quantities of gin and salts.

Q. Diachylon is probably very effective, but gin and salts probably very ineffective. Do you know to what extent diachylon pills are used?—*A.* Very largely. They have no difficulty in getting them, and when once a woman begins the practice of abortion she is apt to continue it.

Q. Would you think it a good thing to prohibit the sale of diachylon?—*A.* Yes.

Q. At present it can be obtained without any trouble?—*A.* Without any trouble.

Q. Can you give us any idea of the extent to which abortion is practised in this particular area in which you are interested?—*A.* I think it is practised very largely, and increasingly largely, among the very poor people.

Q. Do you think that as methods of prevention become more widely known, abortions will diminish?—*A.* I am not sure. Methods of prevention are disagreeable and difficult, as well as being expensive. Alum in cold water and so on are awkward, and properly-working syringes, and the sponge and rubber articles, are very often difficult to buy, and are sometimes apt to irritate. The man practises withdrawal sometimes, but I do not think they know enough about methods of prevention for one thing.

Q. Would you anticipate that, as knowledge of them extends, these measures will be likely to be more largely used, or do you think the question of expense will still militate against that?—*A.* I think the expense will always militate against their use, but I think women will do a great deal in order to avoid becoming pregnant at all; they have not the same sense of wrong-doing as when they practise abortion. I find that puncturing with a needle is very common.

Q. Is that done by a complaisant midwife, or neighbour, or by the woman herself?—*A.* It is done, as a rule, by a woman who goes under some such name as "Granny," or

some colloquial name, and who uses crochet hooks generally, or a knitting needle.

Mr. Hobson. Could you give us some idea as to the proportion of women in your experience who use methods of abortion? Is it one in four, or one in ten, or something of that kind?—*A.* Well, I think it is more among the very poor.

Q. One in two?—*A.* Oh, no, I should put it at about a quarter who practise it at some time in their lives. They do not begin with it straightway, and in this respect they are unlike the upper and middle classes, who do begin with preventive measures, and then very often cannot have children afterwards. But the poor begin by having children, and then resort to abortion later on when the family increases in size.

Q. Have they cognizance of the danger to themselves of using these methods as compared with preventive measures? —*A.* I think they risk it, because the risk of starvation and the difficulty of bringing the children up is even greater.

Lady Willoughby de Broke. Have many instances arisen in your experience where the use of the knitting needle has been connected with the death, or very serious illness, of the woman?—*A.* Yes, but I find it is practised very effectually by women of quite moderate midwifery knowledge. A friend of mine who was at one time at one of the lying-in hospitals has told me that a very little knowledge enables the parts to be ruptured without affecting the health of the mother.

Dr. Fremantle. We have not gone at all into the question of the effect of the maternity benefit under the Act: how far it is being used rightly, and how far it affects the fear of child production?—*A.* I think where the husband drinks the mother regards the maternity benefit as a doubtful benefit, but where the husband is sober I think it is a great boon to both of them. It is almost always drink which makes the husband not take it to his wife.

Q. And how far does the prospect of getting that maternity benefit affect her and her husband's decision to have or not to have children?—*A.* I think not very much, because what the woman chiefly dreads is going through the trouble and the suffering; and afterwards the bringing up of the children is such a very real difficulty.

Q. If that benefit were increased, say, would it really be an effectual check upon the decline of the birth-rate?— *A.* It might if it were considerable. They will do a good

deal in order to handle money. Even £5, as in New Zealand, would be a great inducement.

Q. Even £5 might possibly have an effect?—*A.* Yes, it might, but I think the chief cause of these women not wanting children is because of the trouble.

THE CHAIRMAN. In London maternity hospitals are very popular, and the mothers wish to go. Do you not think it might be the same in Birmingham?—*A.* Yes, if the mothers were taught their advantages; but at present they regard it rather in the light of poor relief; they have the feeling that there was a certain amount of shame and discredit about going there.

DR. FLORENCE WILLEY. Do you not think that if women went to the maternity hospitals, and were saved from the trouble and anxiety of attending to the home at such times, it would result in increased vigour and health both to the mother and child?—*A.* Yes, I think so.

THE CHAIRMAN. Supposing the 30*s.* were to go to the mother, and at the same time she were to be treated free at the maternity hospital, would that not enable her to make provision for her home being properly looked after during her absence?—*A.* Yes, but you understand many women would not trust their husbands to a strange substitute.

Q. If it became known that there was a much better chance of having a normal confinement and complete recovery at the hospital than at home, would not that be a very valuable incentive for a number of women to go to such a hospital?—*A.* Yes, because the women would rather have children than use methods of prevention or abortion, because they recognize that women who use these methods do suffer from headache, asthma, and other things. If I may say so, the women themselves have a very strong impression that any use of quinine results in premature old age in the women who use it for preventive purposes, and they also recognize, of course, that diachylon and other things do produce permanent ill health, and poor children afterwards.

The Witness withdrew.

Meeting.—May 6, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Mr. J. A. Hobson, M.A.

The Secretary. Mr. J. A. Hobson has prepared a statement, which he proposes to read in the first place, and then answer any questions which members may wish to put.—*A.* I am afraid this statement does not consist to any appreciable degree of absolute facts or statements of figures, but is rather of the nature of inference, interpretation, and opinion. But it did seem to me that it might be a good thing that some one should attempt to set before the Commission a general survey of the situation. I approach it primarily from the economic, or the socio-economic, standpoint, which does not exclude the moral aspect of the question.

First of all, as to the motives which seem to operate to bring about the restriction of the birth-rate as practised in different grades of society, distinguishing the wealthy from the middle and working classes. Among the rich, the interference with personal comfort and freedom, the risk, pain and inconvenience of child-bearing, dislike of the care and responsibility of children, especially among the women —the selfish motive in its strictly non-economic form counts most. Even among the rich the "expense" of rearing, educating and providing for children probably tends appreciably to restriction. With these mainly selfish motives others less purely selfish are blended—the cultivation of intellectual, social and other non-domestic interests by wives, the greater regard for the health and comfort of their wives by husbands, a greater desire to do the best for a smaller family, and possibly some qualms regarding their capacity for rearing children properly.

Among the middle classes the economic strain of keeping up a good social position in a society where a secure income adequate to the position is exceptional, is probably the chief direct motive to restriction in the middle classes. The improved education, the increase of salaried or other economic employment, the larger liberty, the increased cultivation of interests outside the home by middle-class married women, contribute appreciably to restriction of families. Greater legitimate regard for health, fear of producing diseased or weakly children, and a reasonable doubt

regarding their personal and financial ability to give the best advantages to a large number of children, probably weigh heavily with many parents of the educated middle classes.

Though the workers are also affected by the strictly non-economic motives, the economic are evidently paramount. Insecurity or fluctuation of income in their case are such as to cause reasonable fear of physical want. The weekly wages of about one-third of the adult male workers in the United Kingdom are below 25*s.*, while that of some 10 per cent. are below a pound a week, a sum wholly insufficient to provide the necessaries of an efficient life for an average family. The average amount of unemployment (omitting time lost from sickness and leakages between jobs) during the last ten years is 5·4 per cent. for trade unionists. For a very large proportion of the workers real wages have fallen since the beginning of the century—at all events prior to the last twelve months. The high prices of food must have operated directly as a check upon the birth-rate in these classes. A still more potent deterrent is the rise of rent, and the growing difficulty of obtaining convenient house accommodation at any price within their means for a family of young children.

What we confront is a general weakening of the feelings which support the full human Family and the Home. Formerly the normal idea and practice were that a young man and a young woman soon after adolescence was attained should marry, set up a home, and fill it with children as fast as they happened to come. Early marriages were considered natural and right, the man was willing to undertake the trouble and risks of maintenance, the woman was willing to bear and rear as many children as came. Those children that survived were accustomed to help in the maintenance of the home as soon as they could be put to work, the boys as wage labourers or apprentices, the girls in the performance of domestic or other work within the home.

Popular education has made the working-classes more conscious of the poverty and insecurity of their position. Though most grades of workers are absolutely better off than was the last generation, their felt wants have grown faster than their means of satisfaction. But there is more forethought, more anxiety for the future, as the risks of working-class life are more adequately realized.

Associated with this more reflective attitude towards life is an increased general regard for the nurture and education of children, for the quality of child-life. Though

this increasing regard for the true interests of the child makes many working-class parents acquiesce cheerfully in the legal restrictions of child-labour, there can be no doubt that the prolonged burden of their maintenance and the deprivation of the wages which they might have earned have operated as a check upon large families.

The old religious belief that, since children were sent by an outside Providence, Providence might be left to look after them has vanished as parents have come to realize that the size of the family lies within their own control.

With these distinctively reasonable considerations co-operate certain changes of feeling and habit more mixed in character.

(*a*) The growth of luxurious expenditure, and the love of recreation, common in different degrees to all classes, especially in towns, affects the home and the family in various ways.

(*b*) I think that the growth of large-town life carries with it an increased unwillingness to undergo the physical risks and pains involved in child-bearing and child-rearing.

(*c*) This is perhaps in a measure associated with the feminist movement.

Such considerations compel us to perceive that we must regard the standpoint of the conscious regulation of the growth of population and of the birth-rate as an accepted policy.

We have seen what the chief motives are which determine individual families in the regulation of their births. The most clear and powerful motive in the great majority of cases is financial economy, based on the consideration of a given income which will yield more security, welfare and satisfaction to parents, and perhaps to the family at large, if the size of the family is kept small. It will generally be held that in this country the gradual reduction of birth-rate in working-class families has not caused any fall of wages, but has been accompanied by some rise in the standard of living of most grades of workers, especially during the period 1876–96.

The Neo-Malthusian contention, however, lays chief stress not upon the gain to the individual family from a reduction of its size below the normal, but upon the gain to the labouring classes in general by following a policy which, by restricting the supply of labour, raises its market price. It is a crusade against poverty.

Now the advocacy of restriction as a labour policy rests on one or both of two assumptions.

1st. That a reduction in the growth of the labouring population will be accompanied by a larger production of wealth per head than would have taken place under a more rapid growth of population. This in effect is a re-statement of the broad plea for restriction as a remedy for over-population. For we cannot for the purposes of our inquiry accept the old definition of over-population for a nation as the pressure of population upon the food supply. Starvation was the old test of over-population; reduction in the sum of economic wealth per head is the modern test. It is true that a certain proportion of this economic wealth must be realized in the form of food and other material necessaries, and that if a nation were confined to its own area of land for the supply of these materials, such a country as Great Britain would at the present time be over-populated. But given commercial intercourse with other countries, a country is not over-populated so long as its growth of wealth (available for conversion into foods and other necessaries or conveniences) is at least as rapid as its growth of population. Now the most authoritative estimates of the growth of wealth in Great Britain show that the rate of growth has during the last half-century been far faster than the growth of population. The following table, in which *The Economist* brought up to date for 1909 earlier estimates by Sir R. Giffen, will establish this—

	Wealth of Great Britain.[1]		Population.
	£		
1865	6,113,000,000	1861	28,927,485
1875	8,548,000,000	1871	31,484,661
1885	10,037,000,000	1881	34,884,848
1895	10,663,000,000	1891	37,732,922
1905	13,036,000,000	1901	41,458,721
1909	13,986,000,000	1911	45,216,665

In a word, wealth has grown considerably faster than population.

But, it may reasonably be urged, the evidence of the growth of national wealth and income faster than the growth of population is not decisive against the labour policy of restriction. The income of labour may not have kept pace with the growth of the labouring population. The increase of income may have gone entirely or mainly

[1] Paton's *Progress of the Nations*, pp. 3 and 703.

to the landlords, capitalists, professional and business men.

Now the question of the distribution of modern incomes is too special for close treatment here. It will be best for me to content myself with the following brief reference to the general result of a calculation by Professor Bowley [1]—

	Rates of Money Wages.	Prices.	Real Wages.
1852–70	Rising fast	Rising	Rising considerably in the whole period
1870–73	Rising very fast	Rising fast	Rising fast
1873–79	Falling fast	Falling fast	Nearly stationary
1879–87	Nearly stationary	Falling	Rising
1887–92	Rising	Rising and falling	Rising
1892–97	Nearly stationary	Falling	Rising
1897–1900	Rising fast	Rising	Rising
1900–14	Falling a little	Falling and rising	Stationary

The rapid rise of prices from 1906 on brought about a fall of real wages during the next six years, with a partial recovery during the last two years. During this century it is probable that there has been no increase in the working-class real income per head, real wages barely keeping pace with the working-class population.

What light does such evidence shed upon the question of working-class over-population? During the whole period 1852–73, when the birth-rate was unrestricted and population was growing rapidly, real wages were rising fast; they continued to rise, though not quite so fast, from 1873 to 1900, when restriction was coming into vogue. Since that time, while restriction is growing tighter, real wages have made no advance. Although in a matter where causation is so complex and so difficult to prove it would be foolish to lay much stress upon the point, it appears that the unrestricted birth-rate of a generation or two ago did not prevent a rise of real wages, while the recent restriction has not prevented stagnation or a fall.

Taking a general survey of the evidence, I am disposed to urge that it is not proved—

1st, that there exists over-population in the sense that the real income of the nation is failing to keep pace with its population;

2nd, that real wages and employment are falling as a result of a definite over-supply of labour.

[1] *Elementary Manual of Statistics*, p. 148.

Over by far the longest part of the period under consideration, the wages of labour in general, and the standard of living of the working-classes, have been rising, and there is no evidence that unemployment is on the increase. This seems to me to point to the conclusion that the growth of population in this country has not been excessive, in the sense of preventing a growth of wealth which yields an increase of real income per head of the population.

But this view, even if sound, by no means disposes of the question of present and future policy. It may well be the case that during the great period of expanding manufactures and commerce, when Great Britain was in advance of the rest of the industrial world, a rapid growth of population was an economic advantage, but that so rapid a growth has now ceased to be economically advantageous. I think some weighty evidence in support of this view might be derived from a study of the statistics of occupations. We may be, I am disposed to think we are, entering a period in which the growth of wealth produced in this country is slowing down. This is quite consistent with the maintenance of a growth of national income as large as ever, for a large and ever-growing share of our national income comes in as interest and profits from investments and business enterprises in other countries.

If this be so, it may account in part for the admitted failure of wages in general to keep pace with the growth of national wealth during recent years. If the production of our national income in the future is going to be derived to an increasing extent from industries conducted in foreign lands with foreign labour, it may be a sound economic instinct which impels the working-classes here to refuse to multiply at the former rate. It is, I think, quite reasonably arguable that a return to the former birth-rate would mean a redundancy of working-class population which would show itself in low wages, less reliable employment, and growing emigration.

I regard the rapid adoption of anti-conceptive methods by the workers as a half-conscious defence of their progressive standard of wages against the new economic forces which are weakening their position.

This brings us to the second of the two assumptions which I said underlay the Neo-Malthusian advocacy of restriction, viz. that only by producing a relative scarcity of labourers can the wage-earners get an adequate share of the national income. Labour may gain either by getting

in wages the same proportion as before of an increasing product, or by getting a larger proportion than before of the same product. It appears obvious common sense to any grade or class of workers that, if they can restrict the supply of their labour, they will, other things equal, get a higher price for it. This is at the bottom of all trade union rules respecting apprenticeship or qualification of membership. In a country where land and capital are abundant, or where either of these requisites is abundant as compared with labour, the remuneration of labour is high. If, then, the working-classes as a whole in this country, where capital is abundant, keep down the supply of workers, each worker will be able to get a higher price for his labour. He may get it at the expense of landlords, capitalists or employers, *i.e.* he may be able to divert to wages a portion of what otherwise would have gone as rent, interest or profit. A good deal of the distribution of wealth is determined by the relative scarcity of the parties among whom it is divided. If labour can make itself more scarce, it will get a larger share. But there are two other sources from which scarce labour may draw its gain. The initial rise of piece or time wages, stimulated by a shortage of labour, will promote improved economic efficiency. This higher skill and efficiency means a larger output of productivity per worker. In other words, a smaller number of better-paid workers may produce as much wealth as a larger number of low-paid, inefficient workers would have produced. Their higher earnings may be in part, not the result of scarcity of labour, but the higher net remuneration of workers working more productively at the same piece-rate as before.

But there is a third source of gain. Though in the regular skilled trades there is no large normal amount of unemployment, the case is far otherwise with the low skilled and casual labour markets. The waste from normal excess of supply over demand at subsistence wages, from leakages and from low efficiency, is in these low grades of the working-class population enormous. All the worst evils of sweating, overcrowding and other economic and moral injuries press most hardly on these grades. Even if the growth of the working-class population as a whole were not excessive, it seems manifest that the growth of this class is excessive. Its children can seldom acquire sufficient skill or efficiency to earn a decent and regular livelihood. They represent a chronic failure of civilization. As a class they do not earn their full keep; they are in many injurious

ways parasitic on the other classes. A marked restriction of their rate of growth would have two beneficial effects. It would raise the value of the low-skilled services they render, thus improving their standard of efficiency and life, while it would relieve the body of the workers from the burden of contributing to their maintenance.

The strongest formal position of Neo-Malthusianism undoubtedly is its insistence that so long as these grades of the population multiply freely, the problems of casual labour and slum life remain unsolved. Their weakest practical position has hitherto been the fact that the poverty, ignorance and recklessness of life among these grades have made them less likely than any others to adopt and apply preventive methods. Though there is sure evidence that the knowledge of preventive methods is reaching them, it is pretty certain that the restriction of the birth-rate in these grades is far less effective than in the higher grades. Here one might refer to Dr. Dunlop's Scottish Analysis, and also to the Analysis in the current issue of the *Statistical Journal* of the cases in Great Ormond Street Hospital.

If the members of the low-skilled, low-paid and irregularly employed classes restricted considerably their rate of growth, there is reasonable ground for holding that they would make a double economic gain, being paid at a higher rate for more efficient and more regular work. The overcrowding and misery of the slum life which is theirs would be abated in two ways: a smaller average family would have a larger and more reliable income to live upon. It is hardly possible for any open-minded reformer to work among the poorer grades of workers in town or country without recognizing how heavily a large family hampers them, not merely as individuals, but as a class, and how the practical impossibility of bringing up such families decently injures the nation. But granting that the individual working-class family, or the low-skilled labouring class as a whole, or even the working-classes in the aggregate, may gain economically and otherwise by the present or a still greater restriction of the birth-rate, does this finally settle the wider question of policy for the nation, the empire, or for mankind? Might it not be the case that the motives of self-interest, which impel the individual family or even whole classes to restrict their increase, collide with the economic or the human interests of the nation, or of society at large?

What is the socially desirable increase of population for such a nation as ours in the early future? What birth-rate

will furnish such an increase? In what proportions would it be desirable that different classes, races or other divisions of the population should contribute to the required growth?

I am rather sorry that this Commission, which by intention and in effect is considering the whole population question, should by its title and preliminary statement have thrown chief emphasis upon the purely quantitative aspect of the problem. For though the decline of the birth-rate has naturally focused attention on the quantitative aspect, it is also true that the trend of serious thought has inclined continually to lay more stress upon the qualitative aspect, under the title of Eugenics. That means subordinating the question of the birth-rate to the question of securing the conditions of health and happiness, the qualitative control of life. To put this issue concretely, I should personally hold that, given the existing economic and social arrangements in this country, a closely restricted birth-rate for the working-classes as a whole, and for large sections of the middle classes, was defensible and desirable, not merely in their own family and class interests, but in the interest of the nation as a whole. A return to the reckless breeding of former times would cause increased poverty, distress, overcrowding, infant mortality, inefficiency and demoralization.

On the other hand, if important changes in the general economic and social arrangements could be brought about, which would strengthen the basis of family life for all classes, by giving security of an income adequate to all sound family requirements, with full access to educational and economic opportunities, and with full public provision against all emergencies to which individual or family efforts are incompetent—if, in addition to these general improvements, society, whether by direct legislative action or by indirect educative action, were giving adequate encouragement to admittedly efficient family stock and discouragement to inefficient stock—under such improved arrangements I should desire to see the maintenance of a birth-rate not much lower than that which exists to-day.

Now, so far as the restriction of the birth-rate is a conscious intellectual process, the most potent motives are the social-economic. If it be deemed desirable to encourage young persons to marry at a reasonably early age, and to have as many children as they are agreed upon desiring, certain fundamental reforms of a distinctively economic nature are indispensable. I can here but barely indicate the nature of these reforms.

The first group relate to the establishment of a minimum standard of work and living for the working-classes. A weekly wage sufficient to provide food, clothing, housing, and other requirements for a family of the socially desirable size is the first essential for the defence of the family and home. With it must be coupled sufficient leisure time to enable both parents to do their duty by the home. Security of regular employment, or of sufficient maintenance during periods of unemployment, is needed to give to parents that confidence in the future which is essential to sound family life. Adequate assistance, medical and financial, to mothers, before, during and after a confinement, must be given by an extension of public health and insurance services. Local authorities must have larger legal and financial powers to deal with the various aspects of the housing problem.

But these and other reforms, relating to a minimum standard, by no means cover all the ground. They hardly touch the restriction of the birth-rate and the weakening of family life among the middle and upper classes. Here the accepted standards of life and conduct are inimical to the production and care of children and the cultivation of home life. Many well-to-do people of the professional and commercial or the leisured classes do not want to marry and settle down when they are young; when they do marry they do not want even a moderate family.

Biology and ethics alike give prominence to the maintenance of the species as the prime object of the individual life. Organic and social life are both evolved largely in order to make better provision for posterity. The fuller individuality and personality of man is not designed by Nature solely or chiefly as an end in itself, but largely as a means for forwarding the progressive purpose of the species. When, by the cultivation of the arts of industry, a large and growing command over the resources of external nature is obtained by man, he is enabled at once to enrich his own personality and to make larger provision for the life of his offspring. But when any individual, class or generation seizes and devotes exclusively to its own private enjoyment all the resources of wealth, leisure and liberty which its command of current industry places within its power, unwilling even to provide for the existence of a posterity, they are sinning against the supreme law of Nature.

No moral teaching, I submit, will cure this malady, unless it is accompanied by thoroughgoing reforms of industry and property which shall distribute work on the

one hand, wealth upon the other, in a more reasonable and equitable way.

One other main line of reform demands separate attention. The economic, legal and conventional position of woman in this country obliges most women to marry as the only or the easiest way of getting a living: their choice of husband is exceedingly restricted, and they have little to say regarding the number of children they shall have. So long as so many women are not free to choose or to refuse marriage, there is no adequate security for sexual affinity, mutual affection and respect, or, in a word, for any of the conditions which make marriage and parenthood a success. It may be urged that this enlarged liberty of woman will not raise the birth-rate, may indeed reduce it further, by abstention from marriage and maternity on the part of some who marry now, and by a larger limitation of the size of the family by the wife and mother. I am not concerned to deny that this may be the case, but only to urge that the qualitative gain to the family and the home, by placing marriage on a more truly voluntary basis than at present, is of vastly greater social importance.

Legislation can do little directly to influence the birth-rate, though it may interfere advantageously with some of the injurious methods of restriction employed. Education, carefully and courageously applied to the formation of an instructed public opinion, might do much for the qualitative character of births. It might even do something to spread a better sense of the dignity and public service of sound parenthood, instilling in healthy parents a recognition of a race duty. But better economic arrangements will do more for the sound solution alike of the qualitative and the quantitative problem.

It must be admitted to be *prima facie* likely that our social reforms may conduce to a further reduction of the birth-rate. This reduction is not necessarily a source of regret. It would be accompanied by a better sexual selection, which would eliminate many bad types of union and offspring. The fewer children actually born would be better born and better nurtured. The quality and efficiency of the nation would be raised. This statement includes moral efficiency, unless it can seriously be maintained that the use of physically innocuous preventives, which will certainly be the chief means of restriction, involves so high a measure of moral degradation as to outweigh all the eugenic and educational benefits.

I do not desire to see a return to the era of large, un-

restricted families with its tale of poverty, dirt, immorality, and infantile mortality. Restriction, achieved wholly or mainly by moral restraint, I hold to be a thoroughly impracticable and futile suggestion. We ought not, therefore, I submit, to commit ourselves to any indiscriminate condemnation of preventive methods.

I hold it unlikely that this nation will proceed to the extremity of regulation practised at present in France and perhaps in certain small sections of our own population. A general and established sense of security of employment and of sufficient livelihood for men and women will encourage earlier marriages, remove some economic obstacles to families, such as the price of house accommodation, give freer play to the philoprogenitive instincts, and enable a larger proportion of children born to be reared successfully.

I would, in conclusion, like to add one word of economic and vital warning to those, if any, who are opposed on moral or on other grounds to all regulation of the size of family, save on grounds of poverty and by methods of moral restraint. If the ordinary man and woman is to win sufficient freedom from the drudgery of routine industry, sufficient leisure for the education and cultivation of the taste and interests which enrich personality and raise the value of life, this can only be obtained on condition of some limitation of the number of mouths to be fed and bodies to be clothed and housed.

The Chairman. I suppose we may take it that there is no doubt that there is a natural limit to the number of people that can be supported in the world, nor that if the birth-rate had no restrictions upon it in any part of the world that limit would be reached in less than a century? The productiveness of the human race would appear to have been evolved in such a way as to meet the losses due to war, famine, pestilence and other causes. In the Middle Ages, for instance, the birth-rate was about 45, and the death-rate about the same. Within the last century the death-rate has been reduced from the mediæval level to 14, and if the birth-rate were maintained at anything like its natural level, about 40, all over the world, the population of the globe, which now is 1,700 millions, would in 120 years have reached 27,000 millions, or about ten times as great a number as the earth could probably support. That, it seems to me, is the fundamental fact we have to recognize, and one that makes a drastic limitation of the birth-rate an absolute necessity.

Then, with regard to our own country, can any one think

it a desirable state of things that this country should contain 60, or 70, or 80 millions of persons, entirely divorced from the land, employed in large towns in producing commodities under rather cheap conditions, because they have to undersell other nations in order to pay for the food to feed them which must be brought in from the other side of the world? Is that a state of things which could possibly produce a healthy or satisfactory nation?—*A.* These are two very large and important points, I quite agree. I did not deal exhaustively with the world problem partly because it would be quite possible for us to take a national view, the nation which is our own, and which we value most highly, and say we are not going to abrogate our right to perform our share in the population and control of the world in the future, and that if we are simply to say, "We will keep down our birth-rate, and reduce ourselves to the position of France, and let other nations go ahead," we shall by doing that allow those other nations to multiply a little faster because we have restricted our population. With regard to the second point, as to whether we are over-populated now because of the divorce of so large a proportion of our population from the soil, I do not know; I have not any fixed view about that. It is not obvious to me that the life of a townsman or citizen in a country like this, social, political and other arrangements being well made, is a worse life than that of an ordinary person pursuing agricultural avocations, or that "bread labour," as Tolstoy called it, is essentially part of the life of every man.

Dr. Fremantle. May I, keeping to the two points which Mr. Dean has raised, ask Mr. Hobson whether it is conceivable to consider any possibility of the world's resources being entirely used up? How far is it possible to say there is such a definite limitation as he says there is?—*A.* I did not understand the Dean as saying there was a *definite* limitation. Reforms in agriculture are taking place which are increasing the available resources of the food supply of the world. But the point is whether that improved productivity of Nature does tend to go along as fast as the pace at which the population left to itself will increase. It is entirely a question of relative pace. There must be a limit ultimately, of course; that everybody will admit, unless you can get some method of chemical feeding.

The Chairman. The limit will be reached long before my 27,000 millions?—*A.* Yes.

Dr. Fremantle. Do you mean "Yes"? Is it a prac-

tical question that we have got to take into consideration—the possibility of the vast, untenanted areas of the Empire and the outer world being absorbed in the near future? Does it really enter into our present economic considerations?—*A.* Personally, I should say no. There is no doubt there has been an increase in the population of the world which has gone on a wheat basis, but that is a very different question; you have to consider that there is certainly in Canada and South America, as well as in Siberia and possibly the Sahara, the potentiality of enormous supplies of food. I do not myself think that the growth of the population of the world is likely in the early future to press very insistently upon the food supply. I see no reason, for instance, why, within the next twenty years, the railways we are building with our spare capital all over the world may not increase the supply of food per head of the population even of the world.

Dr. Greenwood. With regard to the eugenics question, I think you said it would be a very good thing if the best stocks would breed in large numbers. May there not be some contradiction in terms there? I mean in this way—that the kind of people the Eugenists wish to reproduce may be just the people who cannot be persuaded to reproduce by any kind of inducements in the shape of benefits or allowances?—*A.* That may be a practical disability in the applicability of the art of the Eugenist, but it would not necessarily invalidate his theories.

Q. The next thing I was going to ask you, with regard to these people who do not nurse their own children, and who send them to school at the earliest possible moment—whether they should be entirely condemned, or whether there might not be some dissociation between the maternal instinct and the nursing instinct? That is to say, certain persons may be very good parents, and yet very inefficient, and consciously inefficient, directors and trainers-up of children.—*A.* And be conscious of their inefficiency?

Q. I was thinking of the analogy of the bee-hive.—*A.* The analogy of the bee-hive rather lends itself to Mrs. Charlotte Perkins Gilman's view of the crèche and the expert, does it not—that the ordinary mother does not know anything about it at all; that the mere fact of her having borne children does not qualify her in the least for taking care of them, and they ought to be put out to people who have studied the art of taking care of children from the earliest times?

Q. I am not putting that as a general opinion, but I

mean that we should have to take that into account before condemning that course of action.—*A.* Yes. Those parents, in a properly regulated community, would not be able to put out their children; they would be obliged to learn to afford them some sort of parental care, and to apply such degree of efficiency as they could command to the rearing of their children.

Q. Then in that organized State you would rather stop the breeding of the professional type of woman?—*A.* I was not looking forward to such a mechanical society as that. There ought to be a certain amount of elasticity. I think, of course, in a society where it was recognized that the production and rearing of children was the obviously finest of the arts, those women who preferred to devote their entire lives to other professional causes would have some very special reason or genius for doing so, or some special desire not to take part in the normal life of the sex.

Principal Garvie. That is one point on which I would like to get a clear expression of opinion from you. Did you suggest that the progress of womanhood implied that every woman, though a wife and mother, should also have some sort of profession of her own which would give her economic independence?—*A.* My assumption was that every woman should have such an economic equipment as would enable her at all times of her life to have an alternative to living in the home and being kept by the wages or income of the husband. If she was brought up in such a way as to be able to earn her own living, she would choose the time of her marriage and she would choose the husband whom she wished to marry. There are many grave difficulties in detail, no doubt, but I do not think they would prove insuperable in a society that understood how to organize itself.

Q. You did not mean that motherhood and the regular pursuit of her profession or other economic calling should normally go together?—*A.* Oh, no, not at all. I think it is not so normally.

Q. I entirely agree with the argument for women's independence; I only wanted to know whether Mr. Hobson would make motherhood a kind of by-product of a woman's life, while she was at the same time engaged in some other occupation?—*A.* No, that was not my view.

Dr. Scharlieb. Have you an idea that there might be something in the nature of State endowment of motherhood—some allowance to be continued so long as the child was alive, and to cease when the child died?—*A.* I have

not made up my mind about that. My general views incline me very strongly in favour of some such course, but I see such extraordinarily great difficulties, financial, political and other, that I hesitate to commit myself to it. I do not know what would be the condition of things supposing the national Exchequer said, "We will give a weekly bonus for every child that is born in a family." I should hesitate to support offhand any view of that kind, partly on the ground that it might over-stimulate the population, partly that it would stimulate population in certain types of families. I cannot regard it as a present practical problem.

Dr. Fremantle. I take it that your views are founded entirely on an economic basis, and that you exclude from consideration the question of attempting in any way to restrict the knowledge of preventives?—*A.* Well, I think I indicated in what I read where the point as to information regarding preventives comes in.

Q. As a whole you take it as an impossible solution of the problem that there should be any attempt to try to restrict the information or knowledge of preventives?—*A.* Yes; I have assumed that it is impracticable to do so.

Q. We will not discuss it; we will assume it. You said as regards the wealthy classes that the selfish motives ranked highest with them. Do you not think that is rather a sweeping generalization?—*A.* I think I said if you take the different classes and their motives, what I should call the selfish motives bulked larger in the richer than in the poorer classes.

Q. I understand that the general trend of your economic evidence shows that it is largely a question, in the working-classes, of the margin between income and necessary expenditure—the pressure of the margin between income and the necessary or desirable expenditure?—*A.* Yes.

Dr. Savill. Do you think the general employment of women would lead to a reduction in the wages of men? After all, if women are going to be economically independent, must it not react upon the men?—*A.* It might under certain circumstances do that, supposing a number of industries and professions which are at the present time by law or by regulation shut to women were suddenly thrown open to them on free terms. Women having at present to support a lower standard of living, and to contribute less to the upkeep of the family than men have, the immediate effect might be, in some of those trades, to lower the standard wage or the piece-rate applicable to both men and women. That might be the immediate effect.

Q. Of course you take that into consideration when you advocate the employment of women?—*A.* Yes; when I advocate increased economic independence for women, I in my mind keep it in touch with a fuller organization of the work of the country, so as to ensure that nobody should be employed at all below a certain level of wage and all other working conditions; that is to say, that there should not be permitted in this country to be such a thing as a sweated industry.

Principal Garvie. You do not advocate the competition of women with men at lower wages?—*A.* I do not advocate that at all.

Q. There is one very important question. I think you said that the survival rate of the lowest class was highest, as well as the birth-rate?—*A.* I think it is.

Q. That is to say, actually more children survive, and they contribute more to the total population?—*A.* I believe that is so. There is no question about the birth-rate. The difference in the survival rate is smaller, but is still, I believe, highest in the lowest grade.

Q. Is there direct evidence of that?—*A.* I think so.

Dr. Greenwood. I think the number of surviving children is greatest in the lowest class, and although, as Mr. Hobson points out, the difference in the case of the survival rates is nothing like so large as in the case of the birth-rate, it still appears that the net additions made by the lower classes of the population are proportionately greater than those of the upper classes.

The Witness withdrew.

Meeting.—November 13, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. George Reid, M.D., D.P.H., County Medical Officer of Health for Staffordshire.

Précis.

My evidence deals with the question of the effect of the employment of married women in factories on infantile mortality, and also the effect of men and women working in lead processes on miscarriage and still-birth rates.

Early in my experience in Staffordshire, where I have been County Medical Officer for twenty-five years, I was struck by the marked difference between the infantile mortality rate of the two large populous artisan centres in the north and south of the county respectively. It did not appear that this could be explained by differing social and physical conditions, as the northern and southern towns were practically identical as regards hygienic surroundings; in both groups the workers earned good wages, and poverty was not more prevalent in one than the other.

The two areas, however, differ in the fact that while in the southern the majority of the people are employed in collieries and ironworks which do not afford employment for women, in the northern the trade carried on is largely china or earthenware manufacture, in which large numbers of women, both married and single, are employed. One naturally concluded, therefore, that, owing to large numbers of married women in the northern towns being employed in factories during the day, whereas in the southern towns this was not the case, the higher infant mortality in the former was probably attributable, in the absence of any other apparent cause, to the excess of artificially-fed infants.

In order to test this, I obtained from the Registrar-General special figures which enabled me to classify the towns according to the number of married and widowed working women in relation to the female population between eighteen and fifty years, and from these I worked out the following figures, covering the period 1881–1909—

Class according to percentage of married and widowed workers to female population between 18 and 50 years.	No. of Towns.	Total population, 1901 Census.	Deaths of infants under 1 year per 1000 registered births.		
			1881–1890	1891–1900	1901–1909
1. 12 per cent. and over .	5	132,299	195	212	186
2. Under 12 per cent. and over 6 per cent. . .	13	263,868	165	175	152
3. Under 6 per cent. . .	8	131,508	156	168	139

It will be seen from these figures that the higher the percentage of women workers the higher the infant mortality, and that, while the mean rate in the last period was considerably lower in each group than in the previous two decennial periods, practically the same relative proportion

was maintained in the three groups. Had it been possible to exclude other than artisan families and disregard widows, the aforesaid contrasts would, no doubt, have been more pronounced, but the Registrar-General's figures did not allow of this.

Subsequently, however, I was asked by the Home Office to conduct an inquiry into the twelve months' history of infants born in 1908 among artisan families in the six pottery towns, namely, Hanley, Stoke-upon-Trent, Tunstall, Burslem, Longton, and Fenton; and for this purpose four specially selected and experienced women inspectors were placed at my disposal and were at work for five months. From the figures thus obtained I have prepared the following table—

Class.	Number of births in 1908.	Deaths under 1 year.	Deaths under one year per 1000 births.
Home mothers	3,150	462	146
Mothers working in factories or away from home during the day	1,125	236	209

It will be seen that the death-rate among infants of mothers who leave their homes during the day to work in factories or elsewhere exceeds that among infants of home mothers by 43 per cent.

From the same returns I was able to calculate the rates of infantile mortality according to nature of feeding, taking into account only those infants who survived the first month, because it was found that the majority were naturally fed for that period, irrespective of whether the mothers subsequently left their homes for work or not.

The following are the figures—

	Breast wholly.	Breast partly.	Artificially wholly.
Number surviving first month . .	2,429	932	457
Number of those dying under 1 year	235	162	114
Deaths under 1 year per 1000 infants who survived first month	97	174	249
Percentage increase over breast-fed	—	79	157

Of course, as regards the actual rates in this table, they would have been much higher had the deaths of infants during the first month of life been included.

The Home Office inquiry referred to was a very comprehensive one and embraced many facts, both social and physical, bearing on the question of infantile mortality, including the effect of working in lead processes on the miscarriage and still-birth rates.

From these returns I have prepared the following table of figures, in which the rates are corrected for period of married life, the mean period being 8·9 years—

	Number of records.	Percentage of mothers having			Number per 100 mothers.		
		(1) Miscarriages.	(2) Still-births.	(3) Miscarriage and still-births.	(4) Miscarriages.	(5) Still-births.	(6) Miscarriages and still-births.
Housework . .	2,812	16·0	10·6	24·0	27·2	14·6	43·2
Factory and other workers (not in lead)	984	9·2	8·4	16·4	26·6	21·0	47·6
Mother, lead worker previous to marriage, but not afterwards.	121	25·6	6·6	30·6	74·2	11·8	86·0
Lead worker previous to and since marriage.	70	30·0	14·3	37·1	99·0	32·8	133·5
Father, lead worker . . .	148	16·9	7·4	22·9	35·5	11·8	48·0

It is to be regretted that the figures relating to lead workers are relatively so small, but no selection of families was made, and it so happens that among those inquired into as having had children born during 1908 only the number stated chanced to be lead workers. Small though the numbers are, however, they are very significant, and I do not think that the suggestion they convey, that mothers who work in lead are three times more liable to have miscarriages and still-births than other mothers, can be entirely discredited because of possible statistical error. Granting that the figures may be relied upon, it would appear that working in lead before marriage but not afterwards also conduces, in lesser degree, to an increased miscarriage rate,

but not to an increased still-birth rate. It will also be noticed, on comparing the figures of the third column with those of the sixth, that while it is true more lead-working mothers have miscarriages and still-births than non-lead-working mothers, the marked increase in numbers in the case of the former class arises from the fact that among those having miscarriages and still-births the numbers per mother are higher.

Dr. George Reid called.

The Chairman. You have said that, in your opinion, women who work in lead are more liable to have miscarriages and still-births than other women; and I should like just to ask whether women who work in lead have greater facilities for obtaining lead in order to procure abortion than other women. The misuse of lead in that way is exceedingly common, and I should like to know whether the fact that these women can get lead more easily than other women may account for the large number of still-births?—*A.* I do not think so.

Q. You do not think the fact that these women can get lead so easily would account for the difference?—*A.* No, I do not think so. They can get lead so easily, irrespective of that, and they would not know what they were doing as regards strength in taking lead glaze or lead paint, the only articles containing lead they come in contact with. You see, people can get lead very readily from chemists?

Monsignor Brown. In the form of plasters?—*A.* Yes.

Mrs. Booth. The women are well paid?—*A.* The men workers in the potteries are well paid; the women are not so well paid, but the women supplement the income to the extent of from twelve to fourteen shillings a week.

Q. Is it not the rule that where the women work they really need to work; that there is not enough money coming in, apart from their work?—*A.* That is not so, in the potteries, at any rate; it is so in many large towns, like Birmingham, where there are many poorly paid workers. There is a very important point hinging on that, namely, as to how much the wage question affects the mortality. The Birmingham figures seem to show that the possible injury from mothers working is counteracted by the improved home conditions which result from the addition to the wages earned.

Q. You think the men are all earning sufficient wages? So that there is no need for the women to work?—*A.* There

is usually no need, but they generally work because they elect to do so. They do not like to lose the associations of the factory which they have been accustomed to before marriage. This inquiry which I have referred to was conducted by five ladies, and they were all of the opinion that the best houses as regards order and cleanliness were those where the women worked in a factory. They explained it by saying that these women were more energetic; and that when they got home they cleaned their homes better than those did who were at home all day.

DR. SCHARLIEB. Yet, on the whole, you would not say it was an advantage for them to work?—*A.* No, I should not, but the desire to work indicates that the women are more energetic than those who have equal opportunity and do not select to work.

THE CHAIRMAN. The second question is: Are the employed and unemployed samples comparable in respect of social conditions?—*A.* I think I have dealt with that in my evidence where I refer to the difference in the women in the northern and the southern towns of Staffordshire, which was the first thing to call my attention to the excessive mortality. I say there, "It did not appear that this could be explained by differing social and physical conditions." I have no hesitation in saying that, broadly, all these people in no way differed in regard to houses lived in, their prosperity, and their general surroundings. The wages earned were good in both areas, and as regards poverty, which did not conspicuously prevail, there was no distinction to be drawn between them.

MONSIGNOR BROWN. Is there any evidence as to how far these miscarriages are procured, or how far they are accidental?—*A.* There is no evidence.

Q. You have not formed any opinion upon it?—*A.* You cannot form an opinion. I was a member of the Departmental Committee which inquired into the use of lead in potting, and we could not get any decisive evidence on that point.

Q. Is there any evidence from chemists as to their sale of drugs, etc.?—*A.* None that I know of.

Q. We have been told by a witness here that in certain parts—and I think North Staffordshire was cited as an industrial part of the country—the use of lead was very prevalent for this purpose?—*A.* I do not see why it should be more prevalent there than elsewhere. The fact of working in lead should not put it into their minds to procure lead for another purpose.

Dr. Saleeby. Dr. Fremantle asks, "Is there any explanation of this difference between mothers employed previous to marriage and those employed only since marriage?" Does it not suggest a great difference in cleanliness and morale?—*A.* No; I think that all those who work in lead subsequent to marriage have worked in lead previous to marriage; you may, I think, take that for granted. They do not begin to work in lead because they get married. On the other hand, many give up working in factories when they marry. But, notwithstanding that fact, it would appear that working in lead previous to marriage, although not after, causes an increased liability to miscarriage. You will notice that the figures are 74 compared with 27 and 26 respectively among home mothers and mothers working in factories but not in lead.

Q. I see; thank you. Is the high rate in lead workers due to the influence of the lead employed in the work?—*A.* It would appear to be so.

Q. Or to the insanitary circumstances of the work?—*A.* Oh, dear, no.

Q. Or to greater facilities for using lead intentionally as an abortifacient?—*A.* I have answered that.

Q. Or to the coincidence of an inferior social grade with employment in lead works?—*A.* They are not inferior.

Q. It is due to the lead employed in the works?—*A.* Yes; it seems to have some constitutional effect even without causing symptoms, but I do not know what.

Q. To what extent does the birth-rate vary with these figures of miscarriage or still-birth?—*A.* I have not worked that out, but I have got all the material for that being done.

The Chairman. The birth-rate in the potteries is very high?—*A.* Yes, and in all artisan towns.

Q. But not in Bradford and the north generally?—*A.* It has gone down to 19 in Bradford.

Dr. Saleeby. Would you expect to find the birth-rate fell where the miscarriage and still-birth figures were high? *A.* I should say so; yes.

Q. The opportunity is less?—*A.* Exactly.

Q. "What is the proper method of instructing children in their future sexual and parental functions?"—*A.* Very difficult indeed. Amongst that class, I mean. It can only be done at school, and by intelligent teachers. I do not think artisan parents are capable of doing it, as a rule.

Principal Garvie. There would be a strong prejudice on the part of the parent to that?—*A.* There is, I am afraid.

Sir John Macdonell. Ought it to be done at all?—*A.* Certainly it ought to be done.

Monsignor Brown. Beginning at what age?—*A.* Thirteen to fourteen, I think.

Q. Both sexes?—*A.* Yes; I should not make much difference. As regards the female sex, certain natural events should be explained earlier, and that the mother should do.

Dr. Saleeby. "Is a falling birth-rate inevitable with a falling death-rate, as has been suggested to us by Dr. Drysdale?" Dr. Drysdale said the curves were always varying together?—*A.* I do not think so. I do not see why they should be connected. There are many considerations to take into account with regard to that. There are lots of towns increasing in population without having a high birth-rate. That is to say, they are importing young adults, and that causes a low death-rate. It does not follow that one is the result of the other.

Q. I want to ask you now on my own account. You are, no doubt, acquainted with Sir Thomas Oliver's work on *Diseases of Occupations?*—*A.* Yes.

Q. Have you experience of this new method of giving electrical baths to workers in lead?—*A.* I have not had personal experience of that. I hardly think it is practicable on a large scale, and I do not think it is necessary if the new rules safeguarding lead workers are rigidly enforced.

Q. I very much want to know about that?—*A.* It is not practicable, I think, because it would occupy too much of the worker's time. It is not necessary, because I consider that you can practically get rid of the lead difficulty by proper precautions in the manufacture. And now that the new rules have been established as a result of the work of the Departmental Committee, I think you will find that lead-poisoning cases will go down enormously.

Q. How recently is that?—*A.* They have only just come into operation. There was an arbitration with regard to them about a year ago, and the manufacturers agreed to practically all the recommendations of the Committee. They then had to put their works into proper order, with regard to fans, etc., and some time must elapse before we can see the effect of this.

Q. The figures have been going up in recent years?—*A.* No; going down.

Q. Have they?—*A.* Yes. At the time of the inquiry there were only four deaths and something like 124 cases

of illness. But there is a constitutional injury, it would seem, beyond what is apparent from these figures.

Q. Certainly. Have you experience in regard to experimental lead poisoning in animals?—*A.* Yes; we conducted experiments in connection with the Departmental Committee work.

Q. Are those additional to those which are described by Oliver in his book?—*A.* They are fully described in the Committee's Report; but the broad outcome was this: It is the dust which is the cause, not so much the lead taken by the mouth; it is due to inhalation. We experimented with cats, and they flourished on a scruple of lead carbonate every third day for two or three months; but when placed in a cage and compelled to inhale lead dust, they suffered from lead poisoning.

Q. Have you evidence of the effect of parental lead poisoning on the offspring?—*A.* Only in so far as the figures of miscarriages and still-births bear upon the point. You will notice that in the last table there is nothing very striking in the figures and that relating to 148 fathers working in lead.

Q. To what extent were those fathers victims of plumbism?—*A.* That I cannot tell you. And I do not know to what extent the mothers were, either.

Monsignor Brown. Can Dr. Reid say whether, in his experience, when a mother is going to the factory after marriage, she is under any strong inducement to avoid child-birth?—*A.* I do not know that they are.

Q. Can they stay away from work for the period of confinement without difficulty? Are their places kept open?—*A.* There is no difficulty whatever. They have to stay away for a month. I should like them to stay away three months.

Q. Employers would not refuse to have women who stayed away for two months?—*A.* I do not think so. Personally, I should not mind if they did, because I do not think there is any necessity for them to work in lead at all.

Q. The home is quite comfortable without it?—*A.* Yes; and there are other processes which they could be employed in, without working in lead.

Q. You think women go to work to contribute seriously to the income of the home and its amenities, and that that is a strong factor in reducing child-birth?—*A.* I do not understand you.

Q. There is a certain class of woman who goes to work

because she must go; she would be half starved if she did not; and this is the class of woman whose husband is earning good wages and has a decently comfortable home; she goes to work to supplement that, to add to the amenities? —*A.* I do not think she does.

Q. What is her motive?—*A.* They have more money to spend, but I do not think it is spent in a way to benefit the children.

Q. Do you think that is a strong factor in her abstaining from child-bearing?—*A.* I do not think so.

Q. It is probably so in other classes of employment where there is a big penalty put upon absence; but there is no penalty upon absence in this case?—*A.* I do not think so. There is only one reason in this case, in my opinion, for the increased infantile mortality, and that is, in the resulting larger proportion of infants deprived of mother's milk.

Dr. Saleeby. Have you data about that here?—*A.* Yes; you will notice in my Précis I classify into home mothers and mothers working in factories. Those figures are arrived at after excluding all children a month old, whether they have died by that time or not, because I found from the inquiry that practically all the children are fed by the breast during the first month; so I start with a more acute distinction by excluding those children. You will notice that the infant mortality among children of mothers working at home is 146, compared with 209 in the case of mothers at work in a factory. Following that out, I have divided them into different numbers in accordance with the feeding: breast wholly, breast partly, artificially wholly. You will see the result comes out very strikingly. Probably the difference in the rate of mortality is explained entirely by the fact that the child is deprived of its mother's milk. In the case of wholly breast-fed infants the mortality per thousand is only 97; in partly breast-fed, 174; in wholly artificially-fed, 249.

Q. That 249 is appalling, because you have already excluded the infants dying before one month.—Yes; and the figures would be larger in proportion if they were included.

Q. Do you assert anything as to the influence of either the work or of the lead poisoning upon lactation?—*A.* No.

Q. But the women who go to work do not feed their children at the breast?—*A.* No, they cannot.

Q. Of course, it is asserted that lead is found in the milk of mothers suffering from plumbism?—*A.* I do not know that that is so.

Q. It is asserted by Oliver, and he quotes Bateson.

Mrs. Booth. Is there any mistake in the figures in this same column : " Number of those dying under one year " ? The figures under breast-fed wholly seems to be higher than the others ; it is 235 ?—*A.* That is the actual number of deaths in the records of 2,429.

Dr. Scharlieb. It is not percentage ?—*A.* No. These are big figures, and we can fairly conclude there is not much error in them. They were not selected people except that they were all artisans.

Principal Garvie. There seems to be a larger proportion of mothers feeding their children naturally ?—*A.* I do not see that.

Q. You have 2,429 breast-fed only, and the other two numbers added together are smaller ?—*A.* Yes ; they usually feed their children when they are at home.

Q. I ask whether the fact that the mother should feed her children naturally should not induce her to remain at home longer. If she could not feed the child, she might be induced to go back to work more quickly ?—*A.* I do not think it would weigh with her. They have not very much thought about it, among the artisan women. I do not think it would induce them to stay at home in order to feed them. It does not occur to them one way or the other. If they were compelled by law to remain at home for three months they would breast-feed their infants during that time, and that would be an enormous advantage.

Dr. Scharlieb. You think one of the reasons they go back to the factory after marriage is that they have got accustomed to the social life of the factory and its bustle and interest ?—*A.* I think that is, practically, the whole reason ; it is a sort of club for them.

Monsignor Brown. They are dull at home ?—*A.* Yes, after having once experienced factory life.

Dr. Saleeby. The factory does not make provision to enable the mother to nurse her child ?—*A.* No.

Q. Is that feasible at all ?—*A.* I think if it was made a condition the manufacturers would not engage them ; that is all. It is not essential that they should engage them in lead working. We are talking now of lead working, not merely the mothers going out.

The Chairman. Have you noticed that women who work in lead are unable to feed their children ? Is there any tendency that way ?—*A.* I have never noticed anything of that sort.

Sir John Macdonell. Are the wages of the workers

in lead abnormally high?—*A.* Yes, it is very well-paid work, especially as regards dippers.

Q. And for the women?—*A.* The women have higher pay, but not to the same extent, because they cannot dip big articles, only small things.

Monsignor Brown. Does working in a factory tend to put off marriage?—*A.* I do not think so. Marrying does not interfere with them; they simply go on working in the factory. I have reduced these figures to a uniform marriage period, because they would have been useless if I had not done that.

Q. The period is 8·9 years?

Mrs. Booth. As the effect on the women seems to be bad if they have been lead workers previous to marriage, would it not be wise to say women should not, either before or after marriage, work in lead?—*A.* That was seriously considered by the Lead Committee, and the Committee felt they could not go as far as that.

Dr. Saleeby. For economical reasons?—*A.* Yes. Personally, I think they might have done so.

Monsignor Brown. Is the total number of women working in lead very high? Is it a large section of the community?—*A.* I think there are about six to eight thousand lead workers, but the actual figures will be found in the report of the Departmental Committee.

Mrs. Booth. Do the women who work in lead do any work of such a delicate nature that it cannot be done by men?—*A.* No; the lead work which young women mostly do could be done by young males.

Q. So there would be no reason why, on the part of the factory owners, women should not be excluded from lead work?—*A.* No, I think not. There is probably one exception. There are certain classes of lead work which women do, majolica painting. They get paid well for that, because it is nice work.

Q. And they cannot be easily replaced by factory people?—*A.* Not quite replaced by men, I think.

Q. Do you think that that rather influenced the decision of the Committee, the interests of the trade?—*A.* Yes; that, no doubt, to some extent influenced the Committee.

Q. They were not influenced in their decision by the interests of the women themselves, but rather by the interests of the trade?—*A.* They would have liked to have been influenced by the women's interests, but if they had been it would have injured the trade. The same question arose as to the abolition of lead in potting, and if the Committee

had done as was suggested, England would have lost the whole of the American trade.

Q. But in the case of the injury to the women, the effect is very much greater on the second generation than in the case of the men?—*A.* Yes; I agree that they might probably have gone further than they did; at the same time the data in this respect which they had to go upon were not quite conclusive.

Monsignor Brown. From the figures you mention, it could not have affected a very large body of men.

Dr. Saleeby. You think the means now to be taken will avert plumbism very much?—*A.* Yes; it is not a question of handling lead in the moist state, the lead getting on the hands, and so on. There is a striking proof of that. I do not know whether you know the Jet and Rockingham ware; it is black and brown rough ware, cheap teapots, etc. The glaze on those contains more lead than any other glaze does, but there is no lead poisoning among those who work in that branch of the trade, although the workers are covered with the glaze up to their shoulders even. The reason is that they do not "fettle" that ware; it is too cheap, it would not pay to handle it much. It is put straight into the oven, and they do not trim it up afterwards with brushes, tools and sponges, so that no dust is produced.

Q. So what we are told about working-men neglecting to wash their hands before they eat is disposed of?—*A.* Personally, I think it is, though, of course, one does not want to discourage such cleanliness, because a highly susceptible person might thus suffer from lead poisoning. Everything shows it is the inhaling of the lead dust which causes the trouble.

Principal Garvie. Is there any effort made to bring home to these lead workers such facts as we have before us? Have the women instruction as to the dangers involved in working in lead?—*A.* Nothing beyond the work of health visitors, urging them to feed their children. I do not know of any specific instruction with regard to lead. It would be very difficult to make them believe it, because so many work in it without apparent harm. I should like to point out very specially that these figures as regards lead workers are based upon very few records, as I have mentioned in my evidence. I do not want to make more out of them than they convey, but the fact of the enormous difference of 133 compared with 43 and 47 can hardly be accounted for by statistical error.

THE CHAIRMAN. I suppose women who go to factories would have an economical reason, in some cases, for wishing to have miscarriages?—*A.* They might do. They may have an economical reason for disguising the fact that they are suffering from lead. I may mention that when I found these figures were apparently showing such injury, I insisted on a special inquiry into lead workers only. There are plenty of figures with regard to non-lead workers, over 3000, and I wanted to get a larger series to compare with that number, to see whether the matter was so bad as it appeared to be. I accordingly got the permission of the factory owners for two of my own inspectors to go to the factories and get this special information. They were allowed to go in and question the workers with regard to the number of miscarriages and still-births, as the inspectors who conducted previous inquiries did in their own homes. And the result of that was that they obviously did not get the true information. The workers no doubt thought, "You are going to do something to interfere with my trade." The answers they gave, therefore, showed that the safest place for women to avoid still-births and miscarriages was to work in a lead factory, by a long way. But the figures I have quoted were obtained by very skilled and educated women, who went into the houses and talked for a considerable period to mothers on all sorts of subjects, and as they only incidentally asked the special questions probably the answers were correct. The figures of the later and special inquiry at the factories are ridiculous.

MONSIGNOR BROWN. Do you think that even to the ladies the women would have owned up who had had abortions or miscarriages?—*A.* Yes, I think so, having regard to the careful way the questions were put in the course of conversation on many other matters.

Q. I should have thought your figures were rather under than over?—*A.* They are very bad.

Q. Bad as they are, I think they are under the actual. It is very difficult for any one to ascertain, from a considerable number of women, the number of abortions and miscarriages?—*A.* Yes. I do not think they would, as a rule, acknowledge them, but from my knowledge of the inspectors in this case I believe the information they obtained was near the mark.

Q. Therefore I think there might be a little *plus* to those figures?—*A.* I do not think that the lead workers, having regard to the way the inquiry was conducted, would wish to mislead the inspectors any more than the non-lead

workers. The important figures are not the relative number of mothers having miscarriages, but the number of miscarriages per hundred mothers working in a factory. The miscarriage rate of factory-working mothers is rather less than that of home-working mothers : 26·6 as against 27·3. The still-births appear to be higher, however, among the home mothers. If you group the two, miscarriages and still-births, you get 34·2, 47·6.

Dr. Scharlieb. The more delicate women do not go ?—*A.* It might be that; but factory work, compared with domestic work, is not so hard as people imagine.

Q. House work is very hard ?—*A.* Yes; I do not think there is much to choose between the one and the other as regards infant viability or mortality.

Q. Don't you think that specific disease has most to do with it ?—*A.* Yes.

Q. And the miscarriages, the majority of them ?—*A.* Yes. People are too apt to attribute damage to infant life to ante-natal conditions. It is when the child arrives that the care has to come in.

Q. The child is more affected by the blood circulating in the mother than it is affected by the external circumstances amid which the mother lives ?—*A.* Yes; and feeding is the chief factor afterwards. If mothers gave their infants proper artificial food, it is difficult to say to what extent the infant death-rate among such would differ from that of those naturally fed; but they do not give them proper artificial food.

Q. These mothers could not afford it ?—*A.* Yes; but they do not know what proper feeding is.

Mrs. Morgan. Have they means of instruction ?—*A.* Yes; now that midwives are being trained, it will make an enormous difference in the number of children who are naturally fed, and in the way in which artificial feeding is carried out. I do not know to what extent that has had influence in lowering the infant mortality in the last few years, but it has fallen considerably.

Q. Does that coincide with the instruction by midwives ?—*A.* Yes, and with the growth of health visiting. The Midwives Act was passed in 1903.

Mrs. Booth. Would it be possible for medical men to speak authoritatively about foods ? Some foods for infants which are injurious to infants under six months old ?—*A.* Yes. They do speak authoritatively, but they are not listened to. A woman will pay more attention to another mother, ignorant though she may be, than to a doctor.

Q. But such foods have not been put out of court by doctors?—*A.* I think most doctors endeavour to induce mothers to give a properly adjusted milk diet when artificial feeding is necessary.

Dr. Scharlieb. That is an argument in favour of having married women doctors, because they can combine the two?—*A.* I think the greatest influence in the house is the midwife.

Dr. Saleeby. We are left with the figure 11·8 in the last column but one, as an anomalous figure, are we not?—*A.* Yes; miscarriages especially, not still-births, appear to result from working in lead. If pregnancy goes to a period of possible live-birth working in lead does not seem to be so detrimental. If you can undertake to get further particulars extracted from the 5000 returns I will send them up to you.

The Chairman. We are very much obliged to you, Dr. Reid, for giving this evidence.

The Witness withdrew.

Meeting.—November 20, 1914.

Chairman.—The Lord Bishop of Barking.

Witness examined.—Sir Thomas Oliver, M.D., LL.D., D.Sc.

Sir Thomas Oliver, of Newcastle-upon-Tyne, said that as Newcastle was the home of the white lead industry, it offered a fruitful field for the study of lead and its effects upon the human body. His experience of lead poisoning was drawn from two sources: (1) The effects of lead upon workers in the factories, and (2) the use of diachylon as an abortifacient. Over twenty years ago, owing to having witnessed its pernicious influence upon female life and motherhood, he had been instrumental in getting the Home Office to abolish female labour in the dangerous processes of white lead manufacture. So long as women were allowed to work in factories it was almost impossible for a woman, if pregnant, to go to term and give birth to a living child. The waste of infant life was enormous owing to the expectant mother miscarrying, giving birth to a still-born child, or to an infant who died in convulsions a day or two after

its birth. Abolition of female labour in the dangerous processes has been followed by the happiest results.

That lead is capable of causing the death of offspring Sir Thomas said he had proved experimentally by feeding animals upon lead, and by finding lead on chemically examining their internal organs after death. In the body of an infant born of parents both of whom were lead workers, who died two days after its birth, he found lead. There was therefore no doubt that lead could pass from the body of a woman to the child in her womb, and that it was capable of causing death of the offspring. The reason why the female sex is so much more predisposed to be harmfully affected by lead than the male was that the metal exercised an injurious influence upon her reproductive functions. The monthly periods became deranged. There was frequently serious hæmorrhage, also a greater liability for the nervous system to be gravely affected, and for blindness to occur. He had recently visited some of his old lead patients who, as young female workers twenty years ago or more, had lost their eyesight through working in lead. These women are still blind. Fortunately, owing to the restriction of female labour in lead works and the improved condition of labour, these serious troubles were very infrequently seen to-day.

In a paper which he had published in the *British Medical Journal* last year, Sir Thomas drew attention to the increasing use of diachylon by pregnant women for the purpose of inducing miscarriage. He had seen serious illness, such as paralysis of the hands, eyeballs, and incomplete blindness follow taking the drug, to say nothing of the excruciating abdominal pain which the woman experienced who had resorted to the diachylon. For twopence a woman might purchase sufficient diachylon and aloes to cause her to miscarry, while she at the same time might imperil her own life. He had known of two fatal cases, also of several women who would probably never enjoy the same health as formerly.

There are certain streets in the working-class districts of Newcastle-upon-Tyne where not only is the practice of taking diachylon by pregnant women indulged in, but several of the women take the drug regularly before each expected monthly period, so as to ensure that the event shall be realized. There are no doubt economic reasons in some instances for the wives of some of our working-men resorting to the practice, but in a great many cases the increasing unwillingness to accept the responsibilities of

motherhood, an increasing love of pleasure, and a growing distaste for home and family life are responsible for the practice.

As a sequel to the appearance of Sir Thomas Oliver's paper on diachylon in the *British Medical Journal*, the Association of Chemists and Druggists of Newcastle met and passed a resolution not to sell any diachylon. It is still to be had from some small shopkeepers who are not pharmacists in the usual sense of the word.

Dr. Saleeby. May I ask what shopkeepers?—*A.* The small shopkeepers—herbalists; men partly chemists and partly herbalists. An interesting circumstance has followed the restriction of the sale of the drug in Newcastle. Since the women cannot get diachylon in the better shops, one chemist told the Medical Officer of Health, or rather his representative, that he had now greater demands for diachylon in his shop than he ever had previously. This shows that though the women are not getting the drug in the shops where it was formerly sold, there is still a demand for it. I cannot, of course, say to what extent the diminished national birth-rate is the result of lead in one form or another; but in dealing with this question I might remind you that there are certain towns in Yorkshire where as the result of the drinking water to the towns having been gathered on peaty soil, which gives to the water a distinctly solvent action upon lead pipes, the doctors have told me that the number of miscarriages and still-births in some of the towns exceeds the number of living children born. I cannot say how far lead poisoning through a contaminated water supply contributes to the diminished national birth-rate, nor can I say how much diachylon contributes to it; these have, however, in my opinion a distinct influence. Then comes another point: Should cases of diachylon poisoning be notified to the authorities, and should its use be punishable? That is a point to which you, as a Commission, have probably been giving attention.

Q. No, we have not. The more we hear about this the better?—*A.* It seems to me if you have people going about inducing miscarriage instrumentally, and this is illegal, you have by this other means, and we do not know to what extent it is going on, an equally reprehensible practice.

Mr. Hobson. On behalf of whom are the women to whom you refer acting?—*A.* Themselves, I should say; they give advice to women who are willing enough to accept it and who want to get rid of their offspring.

Dr. Saleeby. Do they call themselves midwives?—

A. Yes, some of them do. They are not certified. I asked, from the Medical Officer of Health for Newcastle, permission to give you a copy of this his last annual report, in which you will find interesting material dealing with the subjects we have been talking about. It will tell you about some of the cases I have mentioned to you, because I was one of those who helped to answer some of the questions embodied in this circular sent out to the medical profession, viz. (1) Have any instances come to your notice where there was reason to suspect that diachylon had been taken for the purpose of bringing on abortion, and if so, how many? (2) Amongst what class of women does the practice exist? (3) Is the use of diachylon, as above, on the increase? (4) Do you find that abortions occur more frequently now than formerly? (5) Is it your experience that illegitimate babies and first children born less than nine months after marriage of the parents are frequently weakly, or have a higher mortality than other infants; suggesting the use of harmful drugs by the mothers during pregnancy? (6) In your opinion, would the scheduling of diachylon as a poison interfere in any way with its legitimate use for medicinal purposes? It is a very complete set of questions.

Mr. Hobson. Do you think that diachylon is used as a substitute for earlier-known preventives?—*A.* As a substitute, no. I should think those who are using diachylon are not using other methods.

Dr. Saleeby. Would you not think that the increased use or knowledge of other preventives would displace the use of diachylon?—*A.* Probably, but I do not know.

Mr. Hobson. Do you think that the wives of the better-to-do artisans are not acquainted with the ordinary preventives?—*A.* I cannot say. The method is being adopted by some of the working-classes of Newcastle and the district, but the mining classes still remain more or less free from both practices. This is extremely creditable to the mining classes of Northumberland, who are a very fine class of men, intelligent and healthy.

Dr. Stevenson. How long has the practice been in vogue?—*A.* I do not think more than the last four or five years.

Mr. Hobson. You are now speaking of Newcastle?—*A.* Yes.

Dr. Stevenson. Was the birth-rate falling before that?—*A.* Yes; and that is why I cannot say how much is due to the use of diachylon, although I regard it as a contributory cause. Our birth-rate has gone up, as you will find

from the report I have handed to the Chairman. We are 1 per 1000 better than we were two or three years ago.

MONSIGNOR BROWN. I suppose there was no analysis of the birth-rate showing what particular form the stratum was?—*A.* No. As Newcastle is a large working-class centre I should think it would be naturally amongst those who most largely contribute to the population, viz. the working-classes.

DR. SALEEBY. You would recommend the registration of still-births?—*A.* I would; and that it should be followed up as to the "why." It would, of course, require a special officer, one with great tact, to do this; I do not think that you will get to a full knowledge of the use of abortifacients until something like this is done.

Q. Do you definitely recommend that the State should have still-births registered, as hosts of other witnesses have told us already?—*A.* Yes.

MONSIGNOR BROWN. There is a permissive Act.

DR. STEVENSON. Under the Midwives Act all still-births are attended by midwives.

MONSIGNOR BROWN. Is not there an Act——?

DR. STEVENSON. The Notification of Births Act, that is a permissive Act, not a voluntary matter.

MONSIGNOR BROWN. It is a matter for the local authority to put it into operation or not?

DR. STEVENSON. Yes. (To the WITNESS): You have a very high infant mortality?—*A.* High enough, but I would not say so high as in some places. We have, I admit, a fairly high infantile death-rate, but I think a great deal of it is due to the severe weather, and to the practice of women taking their children out and standing about with them in the cold when the children are improperly clad. Our weather in Newcastle is severe.

DR. GREENWOOD. With regard to the general question as to the effects of lead, how do you think the white lead factories compare with the Potteries?—*A.* They are better, because the restrictions are more severe in the white lead factories. They now give a smaller percentage of cases in proportion to the Potteries, simply because we think that the people work under better conditions.

Q. So that the principal industrial source of lead poisoning at the present moment is the Potteries?—*A.* Yes.

DR. STEVENSON. I presume the conditions in entirely unregulated white lead works would be worse than in unregulated Potteries?—*A.* Of course, because in them we are dealing with the pure material; but in unregulated

pottery work, if we were to go back to the old days of raw white lead instead of the glaze that is used now, viz. the fritted lead, there would be again a high rate of sickness.

DR. SALEEBY. About diachylon, Sir Thomas. You said one of the questions asked in the report was something about how to deal with diachylon apart from its use for medicinal purposes. What is diachylon?—*A.* It is an oleate of lead.

Q. What are its legitimate medicinal uses in modern medical practice?—*A.* Absolutely none calling for its retention.

Q. That is what I wanted you to say.—*A.* It is used as a plaster for supporting parts; for example, if a man gets a fractured rib, or a bruised chest.

THE CHAIRMAN. One has known diachylon plaster all one's life?—*A.* Yes; it is widely known.

Q. For binding up anything?—*A.* Yes. Chemists, however, say, "We can abolish diachylon from our shops altogether; there is no special need for it; we can give you as good a plaster without lead as with it."

DR. SALEEBY. That is what we wanted. I asked Sir Francis Champneys the same thing, and he said there was no need for it.—*A.* That is so.

Q. Then that being so, what do you recommend with regard to diachylon?—*A.* I think as regards diachylon that it ought to be forbidden altogether, both the manufacture and the sale of it.

Q. Both the manufacture and the sale of it?—*A.* Yes.

MONSIGNOR BROWN. You do not think that there is anything else women can get as a substitute?—*A.* Yes; I was coming to that. I do not know whether it is known to members of this Commission, but there are women who when they cannot get diachylon are content to swallow washing soda, and this seems to have the same effect. I do not wish this to become generally known; but the practice is resorted to by women who do not use diachylon.

Q. There are known cases of where it has been taken?—*A.* Yes. My authority for it is a medical practitioner.

THE CHAIRMAN. Are these diachylon pills publicly sold? Are they exhibited in the window?—*A.* They used to be, but that has been stopped.

Q. So they are asked for across the counter?—*A.* Yes; but not in high-class chemists' shops.

MONSIGNOR BROWN. On the whole would you say that the fact of the women resorting to these abortifacients is not a combined act on the part of husband and wife to avoid procreation?—*A.* Yes. I think there must be many cases

where the husband does acquiesce in the act done by his wife; but at the same time I am perfectly certain from several patients I have attended in the Infirmary and in the case of others whom I have seen with doctors outside, that the husband was perfectly ignorant of what his wife had taken.

Q. And therefore was not a party to it?—*A.* And not a party to it. As a matter of fact, it has been the cause of a great deal of family strife.

Dr. Stevenson. You have no knowledge that the husband would induce his wife, who was unwilling, to take it?—*A.* No, I have no knowledge of that.

Monsignor Brown. We have had evidence put forward here that in a number of cases it is a mutual arrangement between husband and wife that there shall be no more children, or no children at all—this was dealing with people higher up socially, and that therefore they had resort to mechanical means to avoid it. But this seems to point to the general use by the women of an abortifacient?—*A.* Yes. I think it is the women themselves more than the men who are to be blamed; the fact of women going about in the guise of nurses telling working-men's wives about diachylon and other drugs confirms this.

Dr. Saleeby. From what as a toxicologist you know of lead you would say that of all means taken to procure abortions this is the most malignant because of its influence on the individual?—*A.* Yes; both at the time and afterwards.

Q. It is particularly pernicious?—*A.* Yes.

Q. And if this Commission were to say that the Government should forbid both the manufacture and the sale of diachylon, it would be at liberty to quote your views?—*A.* Yes; I think it would be doing the country a good service if the manufacture and sale of diachylon were prohibited.

Dr. Greenwood. Is not there a sub-acetate of lead which is easily come by and which is largely used for making lead lotion?—*A.* Yes, I think that is a very important compound to take note of, for a woman might purchase Goulard's Liquid—that is the other name for it. This, too, should be prohibited.

Dr. Saleeby. You mean schedule the whole of lead?—*A.* Yes; and allow it only to be given on a doctor's prescription.

The Chairman. Does diachylon plaster contain lead in large quantities?—*A.* Yes.

Q. And if any one bought diachylon plaster they could get from that plaster what amount?—*A.* For one penny they could get sufficient lead to poison themselves and throw off their fœtus. They also ask for one pennyworth of "black stick," which is aloes. The aloes is an aperient with a specially stimulating effect upon the lower part of the intestinal canal which lies behind the womb. The two drugs taken together cause emptying of the womb fairly quickly.

Dr. Saleeby. You have not mentioned what you have stated in your book, namely the effects of industrial lead poisoning on the father, and through him influencing only the offspring?—*A.* It is the case that a lead-poisoned father is capable of causing the mother to miscarry; it is the mother, however, that I regard as the particular agent who ought to be thought of and dealt with. There is an interesting fact in regard to the mother which I might mention, and it is this, that although women when working in lead factories had a succession of still-born children in whose body lead might be found, the women themselves did not exhibit symptoms of lead poisoning. This shows that the poison can remain latent in woman, and yet although she is not actually suffering from lead poisoning, she is what might be called a "lead carrier," capable of transmitting the lead to her children and of causing their death. The women themselves when they used to work in the lead factories knew this fact, and were wont to say that the only way they could keep themselves clear of lead poisoning was to become pregnant and throw off the child *in utero*. One case in particular occurs to me where a woman had had twelve miscarriages, and yet she was able to go on with her work. She left the factory. In her thirteenth pregnancy she gave birth to a living child—not a strong child, I admit, but the child still lives.

Monsignor Brown. Are the Neo-Malthusians carrying on any propaganda?—*A.* Not an open one.

Q. In London they have done so?—*A.* If there is any propaganda it is not done openly. It can only be carried on among the women themselves.

Mr. Marchant. You think this only passes from mouth to mouth amongst the women?—*A.* The instruction passes down a street, from one house to another.

Q. And is no attempt made to educate the poorer people?—*A.* None to my knowledge.

Q. Not by health visitors?—*A.* Probably. I daresay the superintendent of midwives in Newcastle does her best

to supply proper information, but beyond that I think there is no organized attempt to deal with this question.

Dr. Saleeby. Do you not think that leaflets issued from the office of the Medical Officer of Health might be of use, if distributed, warning the women about the personal dangers they run?—*A.* It might be a warning, but I do not know how far it would be obeyed. I think personal communication would be better, either through a Mothers' Meeting, or something akin to that.

Q. Anyway, you would make lead as inaccessible as strychnine?—*A.* I would.

Q. Supposing we want to get lead scheduled—is there any body, or rather any bodies, as well as the Pharmaceutical Society or the General Medical Council, whom you would suggest we ought to try and influence?—*A.* I think the Pharmaceutical Society would be the one.

Q. A recommendation from that body is, in point of fact, recognized by the Government and the article is scheduled, as happened recently in the case of veronal?—*A.* I think so.

Q. Is there any other body?—*A.* I think you should also approach the Association of Chemists and Druggists in London.

Q. The General Medical Council?

Q. The Pharmaceutical Society would bring it to the notice of the Privy Council, and they would consult the General Medical Council, and it would then be scheduled. I think that is the procedure?—*A.* Yes, I think so.

The Chairman. There is no legitimate use of diachylon —there would be no loss to the community whatever if this were done?—*A.* No loss whatever; the country would not be a bit the poorer but the better for it being done away with, and there would be a lot of suffering saved.

Dr. Greenwood. It has no known therapeutic value?—*A.* It has an astringent action.

Q. That could be replaced by other astringent agents?—*A.* Yes.

The Chairman. I think you have given us most valuable information. A great deal of what has passed to-day is new to us, I am sure. We are much obliged to you.

The Witness withdrew.

Meeting.—December 4, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. Major Greenwood, Junr., Head of the Statistical Department, Lister Institute of Preventive Medicine; Reader in Medical Statistics, University of London.

Précis.

I received from Dr. Savill 791 schedules, 492 relating to women who had received a college education, and 299 to sisters or relatives who had not received such an education. Of the latter class a considerable number related to women who were unmarried, and only 153 were actually available for reduction. Of the former group 481 were used.[1] Three analyses were made. (1) Select groups; in this case the college women consisted of those who had pursued a full course of study in some institution of university rank, excluding physical training colleges, and schedules with doubtful particulars as to duration; the corresponding select non-college women were those respecting whom particulars of duration appeared to be accurate. (2) Aggregate groups. Here all college women were used, whether they had carried out a full course of study or not, and some doubtful schedules were included. (3) General aggregate, grouping college and non-college women together.

	Select College.	Aggregate College.	Select Non-Coll.	Aggregate Non-Coll.
	363	481	136	153
Mean age of wife	27·97 yrs.	27·87 yrs.	26·82 yrs.	26·84 yrs.
Mean age of husband	32·45 „	32·68 „	31·90 „	
Mean duration of marriage	8·1 „	8·01 „	10·47 „	9·98 „
Mean size of family	1·97	1·94	2·24	2·15

The corresponding figures for the general aggregate were—

Mean age of wife	27·6 years
Mean duration	8·5 „
Mean size of family	2·0 „

In reckoning size of family, still-births are included. It will be seen that the duration of marriage is greater in

[1] Since this evidence was given, the schedules have been re-examined and a few slight corrections made, one or two schedules being rejected on the ground of errors or ambiguities in statement. The changes are of no material importance.

the case of the non-college women and that they were slightly younger at the time of marriage and older at the time of record (this is seen on adding together age of marriage and duration) than the college women. The difference between the size of family in the two groups can be *entirely* accounted for by the differences in age at marriage and duration. This was ascertained by calculating a regression equation to give the probable size of family for given age and duration. The result is that the predicted mean for non-college women is 2·34, the observed value being 2·15. Consequently there is no reason to suppose that a college education has the slightest effect upon the capacity to bear children, although, owing to the postponement of marriage, on the average about a year, the effective fertility of the college women will be slightly reduced. This result completely confirms that of Mrs. Sidgwick. We may consequently consider the data as a whole. Applying the regression equation to determine the probable size of completed family, *i. e.* the number which will be born by the time the mother is past the age of child-bearing, we reach as an upper limit 4·0 children. This value is slightly too high, since it is based upon an equation of the first degree which is theoretically inappropriate, and exaggerates the size of family for very long or very short durations. The size of family is markedly below that of the recent Scottish Census of Fertility (5·49), and probably much below that of the subjects' parents.

Questions were asked as to limitation of family: this question was not answered by 167; limitation was acknowledged by 289; limitation was denied by 188.

The methods of limitation were stated in many cases, the figures being: continence 105; *coitus interruptus* 26; pessaries, sheaths, douches, 52.

The grounds of limitation were stated to be: economic 130; health 90; doubtful 69.

According to the answers it would appear that more than 40 per cent. of the sample consciously limited their families or attempted to do so. This is a smaller proportion than that found by Mr. Sidney Webb in his inquiry published as a Fabian tract.

A very singular feature of the schedules is the following. If we compare the limited and unlimited families as a whole, we have—

	Limited.	Unlimited.
Age of wife	27·2	28·5
Duration	9·8	8·5
Mean size of family	2·4	1·6

Since this includes sterile marriages the result is not surprising, but if we exclude sterile marriages the limited unions still do not exhibit a sensibly different mean size of family from that of the unlimited marriage. The figures are—

	Limited.	Unlimited.	Limited by Artificial Means.
Age	27·2	27·6	27·5
Duration	10·2	9·2	9·2
Size of family	2·6	2·5	2·5

Since it might be that the persons who limit their families were naturally more fertile than the rest, two other methods of analysis were adopted. In the first place it seemed probable that limitation is less practised during the first three years of married life, so that a comparison between the two classes during that period might bring out the true fertilities. The means proved to be 1·2 for unlimited and 1·3 for limited families; once more no tangible difference. In the second place, since fertility is a heritable character, if the non-limited families were naturally less fertile, a comparison of the parents of the two groups should bring this out. The means proved to be 6·1 for unlimited, 5·5 for limited. In other words, we find no difference either actually or potentially between the fertility of the limited and the unlimited marriages. Since, as has already been shown, the fertility of all the marriages is below that either of the existing population in general, or of the parents of the subject in particular, the *prima facie* inference is that volitional restraint has produced little effect, and that the lowered fertility is the expression of a natural change in the sense of two witnesses before the Commission, viz. Dr. Brownlee and Dr. Chalmers. I am of opinion that we should hesitate before adopting that interpretation in view of the cogent indirect evidence afforded by other data that the fall of the birth-rate is differential and that the differentiation is largely economic. There are at least two considerations which must be borne in mind in connection with these schedules. The first is that all the marriages described as unlimited may not have been so. I do not suggest that the answers are intentionally false, but it is possible that many may have considered that limitation implied the use of mechanical means; that marriages in which the parties merely abstained from, or limited the occasions of, sexual intercourse may have frequently been entered as of unrestricted fertility. In the second place,

the schedules do not provide us with information as to when limitation was introduced. We are told, for instance, that the size of the family was five and that its number was limited. This may mean *either* that throughout the duration of the marriage preventive measures were adopted from time to time, *or* that *after* five children had been born fertile intercourse was stopped. In the absence of detailed information on this point it is plainly impossible to form an accurate judgment as to the effect of limitation.

The last point which arises is as to whether the production of children is sufficient to maintain the numbers of the middle class by procreation. Work on this point is not yet complete; my impression is that at the outside the numbers will be just maintained. This, however, involves several considerations which, as I shall explain to the Commission, are both important and uncertain.

I should add that the assistance rendered by workers in my laboratory, particularly by Mrs. Frances Wood, B.Sc., has been invaluable in the carrying out of a somewhat laborious task.[1]

Dr. Greenwood. I think perhaps it might be convenient if I give a few supplementary notes on this précis. In the first place, I will hand round the schedule of the colleges and universities from which these women came. The only point to comment upon there is that Oxford and Cambridge form together very much the largest section, and it is matter for consideration as to whether that does not indicate that the upper middle classes are perhaps more largely represented than they would be in a sample of middle-class people as a whole. Then, with regard to the method of doing the analysis, there are just one or two notes to make about that. The reason for choosing a select group in the first instance was because the chief point we had to investigate was whether education *qua* education had any effect upon fertility, and consequently it seemed reasonable to exclude women who had been at institutions which were hardly of university rank; for example, physical training colleges, schools of cookery and places of that sort; and then it seemed to be desirable to exclude the women who had not really carried out a full course. There was necessarily in a large number like this a certain number, judging from internal evidence, who had only been at college

[1] A much fuller analysis will ultimately be published. The evidence here given is necessarily incomplete.—M. G.

one or two terms, so they were excluded, and also a certain number of others were excluded owing to the difficulty of ascertaining the actual duration of marriage. The Aggregate College, which included all college women, gives substantially the same results as the Select College. Then the next point was to compare the fertility of the college women with the non-college women, and to do that it was necessary naturally to make allowance for the fact that the duration of marriage and age at marriage was not the same in the two cases. The objective fact is that college women tend to marry close on a year later than their non-college relatives. That is in agreement with what Mrs. Sidgwick found years ago, and the only point that was left was to ascertain whether, apart from that actual difference in the age of marriage, there was any real physiological difference in fertility. For that purpose, one has to correct to bring them up to an equal duration of marriage. That is purely statistical, and I employed the method used in the Scottish Census, having very carefully tested its accuracy; and the result is that the predicted mean for the non-college women, based upon the general results, is 2·27, the observed value being 2·16. In other words, there is no difference between the fertility of the college women and the non-college women, allowing for the difference in duration. It is of some interest to notice that one is able from that equation to predict with the greatest accuracy Mrs. Sidgwick's result. Mrs. Sidgwick's results, on her data relating to practically a generation earlier, were that the mean age at marriage was 26·7 years for the college women, and the mean duration 4·31 years, and the mean number of children 1·53. Now, if we use the equation deduced from our sample, and predict what would have been the mean number of children, one reaches 1·54, which, you see, is in practically complete agreement with what Mrs. Sidgwick actually found. The same remark applies to the sisters. In Mrs. Sidgwick's experience the sisters were 25·5 years of age at marriage, and their duration was 8·83, and the observed fertility 2·39. Deduced from our equation, it should be 2·3. Once again the agreement is extremely good, you see, so that I think we may definitely conclude, on the basis of Mrs. Sidgwick's observations and the Commission's observations, that there is no physiological difference between the fertility of college women and non-college women.

Then with regard to the expected size of family, in this class, using the equation mentioned, one reaches the result that the probable size of family of these women—I am now

grouping together college and non-college women, because, as we have already seen, there is no effective difference between them—the mean size of completed family would be 3·6 or thereabouts. That, of course, is very much below the mean completed size of family shown by the recent Scottish census. That was 5·5, and it is below that of the subjects' parents.

Now, as to limitation of family, the figures appear in the précis, and you will note the fact that a very considerable portion did not answer that question. Then, of the remainder you see that of those who did answer the question, the limited families were in a considerable majority. The method of limitation is stated underneath. One point there to which I should call your attention is the fact that artificial methods, in the vulgar acceptation of the word, are together fewer than the number of marriages limited, or said to be limited, by abstinence from sexual intercourse. Then the grounds of limitation do not require any comment. As would be expected, economic grounds form the majority.

I do not think I have anything to add to the conclusions I have expressed as to the effect of limitation in the précis, beyond that I ought to give what I consider to be the indirect evidence which seems to me so very cogent. The very marked difference between the practically constant birth-rate of a poor-class district like Shoreditch and the rapidly declining birth-rate of a wealthy district like Hampstead and masses of similar evidence collected and analysed by Professor Karl Pearson, Dr. David Heron, Miss Ethel Elderton and others, can only be interpreted on the basis of Dr. Brownlee's theory if we suppose that germinal variations may be and often are restricted not merely to particular towns and counties, but to particular classes within those towns and counties. This supposition is, I think, a difficult one to adopt.

Then the last point I should bring before the Commissioners is that I have now completed an attempt to find whether this size of family is sufficient to keep up the numbers of the middle classes by procreation. The method is this, and the weak points will strike you at once. One has a population marrying at certain ages; that is to say, I have made a table of population of 1000 persons marrying at the ages shown by our schedules: 6 women married at the age of 20, 9 at 21, 35 at 22, and so forth. Then I have determined the average age of the husband corresponding; that is to say, I have assumed 6 women married at the age of 20 married men aged 32, and similarly with the other

ages. Then with the help of the last issued life table—English Life Table No. 8—based on experience centring round 1911, I have determined the numbers of these marriages that would be dissolved by death from year to year; and then, with the help of the regression equation, I have calculated the number of children that would be born during the existence of the marriage or until the wives have passed beyond the age of 46. I find that the 1000 marriages would yield 3,267 children. I then attempted to calculate whether this number of children would suffice or more than suffice to replace the 1000 marriages of which they were the products. The conclusion reached was that the number might hardly suffice. The whole calculation is, however, subject to error and involves various assumptions the validity of which I hope to discuss later on. I am not at present inclined to attach very much importance to it.

THE CHAIRMAN. There are two or three questions I want to ask Dr. Greenwood arising out of his paper, which, I may say, has been certainly one of the most interesting and important we have had. Among the girls who go to women's colleges, they go there from different motives; some to play games, some for social advantages, and others to work. A few years ago very careful statistics were drawn up as to the fertility of women, either both at Oxford and Cambridge or Oxford alone—I am not quite sure which—arranging them in classes, with the remarkable result that the third class women had more children than the second class, and the second class women more children than the first class. Those who had been through a severely intellectual course were disposed to be sterile, and those who had obtained, say, a first-class in mathematics were the most barren of all. That, I think, is important. Further, I should like to ask Dr. Scharlieb whether she can confirm or contradict this. I seem to have noticed that among the most intellectual women at Oxford and Cambridge there was a decided tendency either to have no children or one or two children, and also to have very great dangers at the time of child-birth. That is my first point. The second is this: that I suppose we might assume that the majority of those who refused to answer the question about limitation probably did limit their families. Of course, if that is true, it would considerably alter the proportion. Thirdly, I slightly regret that one other question was not asked, and that is whether the observance of times and seasons was resorted to by any large number. I think it is quite possible, indeed probable, that a great many of those

who put themselves down as exercising continence really meant that they confined their marital relations to that time of the month when conception was least likely to occur. At all events, that is a question it would have been interesting to have an answer about.—*A.* That is so. Under the head of continence, I have grouped all those. Some of the answers gave that simply.

Q. Of course, as these investigations were made chiefly amongst educated people, I think we might fairly assume that the proportion of continence is very much lower amongst the lower classes, where there is no opportunity for occupying different rooms, or anything of that kind.

Dr. Scharlieb. My experience is not at all agreeing with yours. I have never known that there should be extra difficulty or trouble at the time of child-birth in highly educated women rather than in the others, and I think that when matters are left alone, when there is no artificial restraint, that the educated women are quite as fertile as the others, but I am afraid there is a certain amount of unwillingness. They marry men in their own rank of life, very likely of their own school of thought, and they are very anxious that their children shall begin where they left off, and I think that probably accounts for the smaller size of family; but these are all impressions. There are no statistics.

The Chairman. And also the natural wish of the intellectual woman to continue intellectual studies.

Dr. Scharlieb. I am not sure. I think they generally give them up after marriage.

Mr. Marchant. There is no disturbance of the nervous or reproductive functions induced by over-mentality?

Dr. Scharlieb. No, none, so far as I am aware.

Mr. Marchant. Or over-absorption of the blood by the brain?

Dr. Scharlieb. Apparently not. I think, if that argument tells at all, it tells against the father. A good many women who have consulted me have told me their husbands had very little or no natural desire, and they were all highly intellectual men. They were not men who were paid by time, but men paid by the piece, so to speak, or who had given themselves up to abstruse studies. But, on the other hand, of course, if you take the case of some of the men we know best, who are very learned and hard-working, we find they have five or six children.

Monsignor Brown. On the economic side, did any of the women interrogated give as a reason the wish to be free

to follow out any studious career or work without the interference of maternity with it? Was that reason given? —*A.* Yes.

Q. Apart from sheer means?—*A.* Yes; some people did say that.

Q. You would bring that under economic?—*A.* Yes.

Mr. Marchant. As Dr. Scharlieb has to go, would you like to hear the information she has here in a very short compass obtained from another schedule? Dr. Greenwood might be interested in it, and it might throw light on the subject.

Dr. Scharlieb. This is founded upon replies to a schedule sent out by Lady Willoughby de Broke; the forms were sent out to middle-class families. One hundred and eighteen forms were returned; 1000 were sent out. That is a very poor return. The average number of children per family was about $3\frac{1}{3}$. As to limitation of families, in 24 instances there was no answer given, 19 said there was no limitation, and 75 confessed to limitation. The average number of children in the unlimited families was said to be $2\frac{1}{2}$; the average number of children in limited families was $3\frac{1}{3}$. These averages are taken without regard for the duration of marriage, but the limited families are larger on the average than the unlimited. It would seem there is a desire for children in most families, but the number desired is limited. Only one marriage was childless, and there children were desired.

Method of Limitation. Voluntary restraint, 37; artificial methods, 33; method not stated, 5.

Reasons Alleged for Limitation. Health first, to prevent too frequent pregnancies, 5; health of mother, 14; health of father, 1; fear of inherited disease, 2.

Economic. Expressed variously as economy, giving children a good education and start in life; dependence of family on father's good health; expenses of professional life, etc., 38.

Employment. There were two cases of officers who were obliged to move from place to place.

Other Reasons were: dislike of the mother to having children through fear, 1; owing to two out of three dying in infancy, and they did not want any more, 1; desire to have none but had one, 1; ambition and dislike of child-bearing, 1; not more than two desired, 2; five enough, 1; six enough, 2; three enough in busy modern life, 1; social life of mother, 2. Two forms were accompanied by an analysis of motives. In the first place, the writer explained

that, although the family income was large, the necessary professional expenses of the husband, a consulting physician, were so great as to leave very little over for the education of the children. In the second case, the writer said that at the time she married the question of limiting the family was much discussed, and it was generally considered desirable to limit. The writer had four children. In her husband's family—who was one of nine—all had small families—in only one case for health reasons. She thinks she sees signs of a desire for larger families among the couples marrying now, and would herself now have more children if she began married life over again.

Those were sent in by Lady Willoughby de Broke, and analysed by Miss Elkin.

Dr. Stevenson. There is one result common to all these inquiries, and that is apparently that the great majority of persons of whom inquiry is made use some form of limitation; Mr. Sidney Webb's and yours, and this one now; all three inquiries are alike in showing the extreme frequency with which limitation is resorted to?—*A.* Yes, quite!

Monsignor Brown. Only we have no data as to when it begins. Has there not been a view expressed by one or two witnesses that it began after the first child, and in an increasing number of cases? We have no data, have we, to enable us to form any opinion as to whether it begins as early as that, or whether it defers the birth of the first child?

Dr. Florence Willey. Has there been any attempt to divide the college women into those who give themselves entirely to their studies and do not take any sports at all, and the women who combine exercise and so on, and sports generally, with college work?—*A.* The information on that is given in the schedules. It would be possible to do that. That is to say, the question is asked, "Did you play games, and if so to what extent?" It would be quite possible to make that division.

Q. I think it would be a very interesting one in view of the question as to the difficulty of child-bearing afterwards, and also it divides off the unnatural college women—the ones who do nothing but brain work—from those who live a normal college life and do sports as well?—*A.* Quite!

Monsignor Brown. Do you think very many lead a sedentary life, even if they do not play games? Do they not take walking exercise?

Dr. Florence Willey. I believe some do; I think

they did previously, more than they do now; and I think the impression of the lack of fertility among college women has probably arisen through estimating that type of college women rather than the more modern.

MONSIGNOR BROWN. You think she would necessarily be unfertile—a very sedentary woman?

DR. FLORENCE WILLEY. I do not think so, but if there were any damage done to fertility I think it would be more likely to be in women who take no sports or exercise.

MONSIGNOR BROWN. Damage done by sheer study?

DR. FLORENCE WILLEY. I mean damage done in fertility, and in difficult cases in child-bearing; the athletic women have so much less difficulty.

PRINCIPAL GARVIE. Might I ask Dr. Greenwood this: The factor of the father, his profession and his previous education; that is not given in any way?—*A.* That could be dealt with. The profession of the husband is given in practically every case.

Q. Is it?—*A.* Yes.

Q. Seeing that the investigation on the women's side practically shows that there is no influence, it is hardly worth doing on the other side, I suppose?—*A.* As to the experience with regard to the influence of the husband, in the case of the Scottish census—and I think I am quoting Dr. Stevenson correctly when I say that in the case of the existing analysis of the English data the importance of the age of the husband, which one has generally regarded as being of moment, is very much less than has been supposed. As to the profession of the husband—the point you are on now—that could be considered on the basis of these schedules, because that is given.

DR. STEVENSON. But amongst people of more or less the same social class, it does not seem very likely, does it, that the difference in the profession of the husband would have an effect?—*A.* No; the only point that occurs to me that might be relevant there is that there is, of course, a considerable number who would be members of the clerical profession, and of course there are a good many medical men. I think the question of profession might have some relevance in that connection. The probability is that in the families of the clergy limitation would be less likely to come in.

Q. But, as a matter of fact, we find that amongst all the liberal professions the corrected birth-rate is very much the same?—*A.* Yes.

PRINCIPAL GARVIE. There are two reasons which are

very possible. Would not one be the greater economic pressure on the family in the professional classes? I mean, there would be more voluntary restriction?—*A.* Yes.

Mr. Marchant. In this schedule are you not dealing with a specialized class of women, and also probably a specialized class of husbands; that is to say, the intellectual women probably married intellectual husbands?—*A.* I do not know that one could answer that quite off-hand. I should have said the professions of the husbands are very various; all ordinary middle-class occupations. A point we might perhaps bear in mind in this question is, it is evidently impossible to suppose that the use of artificial means does not check fertility. We cannot suppose that, and yet we find there is no effective difference between the fertility of the alleged limited families and the alleged unlimited families. It seems to me the only way in which we can account for that is by supposing that among people who say "No" in answer to that question, there are in effect a very large proportion who do limit their families in the sense that Mr. Dean suggested—restrict the occasions of sexual intercourse, or even possibly abstain entirely; and a person in answering the question as the Committee framed it, "Do you limit your family?" might conscientiously answer "No," because wherever the word limit is used in popular speech the idea of some artificial interference is always associated with it, and that seems to me the only way one can account for the result. If that be true, the secondary consequence is that far too much emphasis has been put on the artificial side of the question, which seems to accord with the evidence we have had here of people vending mechanical and chemical devices. It did not point to any great increase in their sales, and suggests perhaps that the factor of more practical importance in our class of life is voluntary abstinence from sexual intercourse; and that consequently, as far as affecting the decline in the birth-rate is concerned, not so much can be hoped for from any question of altering the law or anything of that sort regarding the sale or otherwise of artificial means.

The Chairman. Of course, that is rather a different question from the prohibition of abortifacients?—*A.* Quite!

Dr. Stevenson. But do you think that the evidence against the greater natural fertility of the limiting class is conclusive? The obvious thing to suppose when one sees your results at first sight is that the fertility of the two is equal, because it is the couples with the greater fertility who have most occasion to limit.—*A.* Quite!

Q. And I just wanted to ask you whether you thought that, by the means you adopted to examine into that question, you were able definitely to exclude that possibility?—*A.* Certainly not, and I shall be extremely grateful for any other suggestions as to testing that point. Another method I am carrying out in my laboratory now—it occurred to me we could possibly account for the apparent equality by supposing the more fertile people, when they reached a certain number of family, just stopped; and consequently that a group might be made up of people, say, with one child, and people with seven children, and you might still get the same mean as from a group of people who have always three. I am having the question about the variation round the means of the two samples tested. If that were true, one might expect to find, although they had the same mean, that the "limited" were less variable than the "unlimited."

Q. I might mention that in comparing the fertility of occupations, you find that the less fertile professional occupations fall behind, we will say, coal-miners or agricultural labourers to an increasing degree with the duration of marriage.—*A.* Yes.

Q. As the period of marriage increases, they fall farther away from the standard of the coal-miners?

Principal Garvie. Would not that be explained by the difference of age at the beginning of marriage?

Dr. Stevenson. I am speaking of equal ages. There are only two explanations; either along with a greater fertility to start with you get the limitation; I do not know whether that would have any bearing on the point you were speaking of?—*A.* My difficulty is that the secondary evidence is so overwhelming; at least, so it seems to me in the case of Hampstead and Shoreditch and other instances.

Q. Ireland and England is a good instance?—*A.* Yes. When one comes to schedules of this sort, you expect to get considerable confirmation, and it is very startling that you get nothing of the sort.

Q. Of course, the trouble is that this work was not started forty years ago?—*A.* Quite!

Principal Garvie. So far as there is evidence, one can come to this general conclusion, that study is not prejudicial to a woman's health and capacity as a woman, so far as the evidence goes?—*A.* I think unhesitatingly.

Monsignor Brown. Study under good conditions?

Principal Garvie. Yes, study under good conditions.—*A.* Of course, I must remind the Commission again that

this is a sample probably mainly from the upper middle classes. I do not quite know, but obviously if you were to take a sample of the men, if you had a very high proportion of Oxford and Cambridge men, you could quite definitely put them down as being above the middle line of the middle class, owing to the greater expense of education. Is that true of women? That is to say, is the expense of education at Girton as compared, say, with education in London, as a student of the University of London—is it very much in the same ratio as for men?

Q. I should think so.

THE CHAIRMAN. I should think the colleges of Oxford and Cambridge are at the top.

MONSIGNOR BROWN. It is very expensive. I had two wards, and they went to Newnham, and it is very expensive; it is beyond the reach of many, because it is not only the college fees, but the whole conditions under which they have to live—the amenities that go with it too. It is beyond the reach of many.

DR. STEVENSON. What about the proportion of girls who go there having won scholarships?

MONSIGNOR BROWN. That would modify it, but is that very large?

DR. STEVENSON. I am just asking.

PRINCIPAL GARVIE. I do not think there is any scholarship big enough to cover the expenses.

MONSIGNOR BROWN. I do not think the scholarships are very numerous to get them there.

PRINCIPAL GARVIE. Were not inquiries made of the Scottish universities, because that would modify that view very considerably?

MONSIGNOR BROWN. You tap quite another stratum there.

PRINCIPAL GARVIE. Yes.

THE WITNESS. Several were taken from the Scottish universities: 25 from Glasgow, 6 from Edinburgh, 1 from Aberdeen, 1 from Dundee, and 10 from St. Andrews.

MONSIGNOR BROWN. There is very little chance for women in Ireland at all. There are just a few at the Queen's Colleges; they are getting a better chance now.

The Witness withdrew.

Meeting.—December 11, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. Archibald Kerr Chalmers, D.P.H. Medical Officer of Health, Glasgow.

The Secretary. Mr. Dean, Dr. Chalmers thinks of making a short statement supplementing what he has sent in already, before he is asked any questions.—*A.* Mr. Dean, it is scarcely a supplement to what is stated; but I thought it might help members if I roughly indicated what is contained in the typed document you have. The précis begins by stating the crude birth-rate in Glasgow for the last half century, and by pointing out the extent to which it had fallen. I have drawn attention to the fact that the decrease is greater when the rate is based on the number of women at child-bearing ages—I mean from 15 to 45. Taking the marriage rate at 1870–2 as 100, the rate in 1910–12 is 94 when calculated on the total population, but only 88 when calculated on the unmarried females and widows at ages 15–45.

The next point dealt with is the association between the decline in the birth-rate and the fall in the marriage rate, and also the postponement of the age of marriage. The comparison shows that the proportion marrying under 21 and also under 25 has gone down considerably. I have referred to some figures given by the Registrar-General, and I think the importance of these figures depends somewhat on the view one takes of Prof. Tait's formula for estimating the probable fertility at given ages. For instance, from his formula he deduces the potential fertility of women from 15 to 20 as something like 48 per 100 married. When you come to between 20 and 25 it is 41; and in the next period 25–34 it falls very considerably. When one looks at that in association with this other fact, that the proportion of marriages contracted at these two age periods—15–21 and 21–25—has gone down considerably, I have suggested it as one factor that must reinforce the decline in the marriage rate. In the years 1869–81 the proportion of marriages contracted with families under 21 varied from 26·6 to 25·1, but in 1908–10 it had fallen to 18·6 and 17·5. In the same way it could be said that the proportion of marriages contracted with females under 25 years of age

varied in the principal town in Scotland between an average of 46·1 in 1879–81 and 39·9 in 1908–10.

Then, in order to discover earlier information regarding the birth-rate in Glasgow, I had recourse to a volume which was published early in last century by the then Superintendent of Works of the City; and from that it became obvious that one could put a figure on the productivity of marriages in 1711–20. That figure worked out at 420 or so per 100 marriages, having been 417 in the preceding and 414 in the following decade. The figures after that get unreliable, because we had in Scotland at that period the Secession from the Church, and that ended the reliability of the Register of Baptisms. Some earlier information is also available about the time of Archbishop Spottiswood's census, which was taken in 1610. The first available record of baptisms is for the year 1611. If one puts this number against the population, as obtained in the previous year, it gives a birth-rate of roughly 35 per 1000, which quite corresponds with the rate prevalent in the seventies and eighties of last century. The same crude birth-rate is suggested in the only other year for which a population can be got in the seventeenth century—the year 1666, when the population was double and the birth-rate remained the same.

The prime importance of this comparison seems to me to lie very much in a suggestion with regard to the fertility of marriages early last century, which is contained in a statement by Cleland. He says, "As a remarkable proof of the inattention of parents (to the propriety of registering the births of their children) there were in the Barony Parish of Glasgow in 1832 proclamations of 575 marriages, but only 518 registrations of baptism, whereas the number of children effeiring to these marriages would amount to about 2000." The point here is that from the number of marriages stated, Cleland suggests that there should have been something like 2000 births or 348 per 100 marriages. If one takes this expectation alongside the figures which are available for the earlier decades of the previous century, there is a suggestion that the number of children per 100 marriages had become considerably reduced during the 100 years. That is, they were fewer in the beginning of the nineteenth century than they had been in the beginning of the eighteenth century; and incidentally they were also relatively fewer than occurred in the third quarter of the nineteenth century, that is about the sixties and seventies. In other words, we seem to have got into a period of decreased fertility in the

beginning of the nineteenth century in Glasgow—we were between two crests, one may say, one of which occurred early in the eighteenth and the other later on in the nineteenth century.

I have also made some endeavour to discover what relationship there might be between the social conditions in Glasgow and the decrease in the birth-rate; and when one compared it on the basis of the females at reproductive ages (limiting these to the ages 15 to 45), one found the rate fell 13 per cent. for the whole city, but that in seven of the wards it decreased more than 20 per cent., in nine it decreased from 20 per cent. to 10 per cent., in six less than 10 per cent., while three showed an increase. In the précis I have said, "Taking the average death-rate as an index of social conditions, of the seven wards showing a decrease of over 20 per cent. in the birth-rate, only one had a higher death-rate than the city as a whole. Of the nine wards where the birth-rate decreased between 10 per cent. and 20 per cent., four had a higher death-rate; of the six wards where the birth-rate fell less than 10 per cent., three had a higher death-rate and two the same death-rate as the city; while in the three wards showing an increase in the birth-rate the death-rate in all was above the city." One may regard this as having some association with the other fact, that the rate of decrease of a death-rate is, I think, uniformly greater in districts where you have a high level rate, and smaller where you have a low death-rate. Whether that has anything to do with the view widely held that death-rates influence birth-rates to some extent—as is the case in other phases of life—may be a matter of opinion.

Then I made some inquiries in another direction, in Glasgow in order to ascertain whether any definite evidence existed as to the extent to which means of procuring abortion were being had recourse to, but failed to find any showing that the practice was increasing or even general. One general practitioner who had been in Sheffield before coming to Glasgow was of opinion that while the practice was common in Sheffield it was not at all common in Glasgow, and there was only one chemist among all I questioned who told me that the sale of diachylon was on the increase. That information is borne out by one illustration in connection with the experience of the Maternity Hospital. One of the staff there told me that they had only one woman admitted suffering from miscarriage or abortion who frankly stated that she had taken diachylon pills; and she also made this suggestive addition—that she had been on a visit to some

friends in Yorkshire some time before, and then had got some knowledge of it.

It occurred to me to supplement what is stated in the précis by a reference in one of these papers—a paper which I contributed to the International Congress of Medicine as to whether we know sufficient of the causes of miscarriages and still-births. I do not think we do. There is evidently an increasing belief that syphilis plays an undoubtedly great part in the production both of dead children and of miscarriages at an earlier period. This suggests at least one practical direction, which inquiries similar to the present might take. I do not know, Mr. Dean, that it occurs to me to supplement this any more at present, but some things may emerge in the discussion.

THE CHAIRMAN. I gather from your statement that the knowledge of the means of preventing conception has only recently come to Glasgow?—*A.* Well, in one or two isolated cases; but I sent the circular referred to to about 600 general practitioners in Glasgow, and I got replies from nearly 300; and with one or two exceptions they knew nothing of it.

Q. There is nothing like the universal knowledge which is to be found in the large towns in the north of England?—*A.* No.

DR. SALEEBY. You are talking about diachylon now, are you not, not about the prevention of conception at all?—*A.* No, entirely of abortion.

Q. You are not asserting that knowledge of the means of prevention of conception does not exist in Glasgow?—*A.* That would not definitely come within the scope of that inquiry. But on the general question what one naturally saw was this: that if one were to attribute any great part of the fall in the birth-rate to a mere change of age-limit in the marriages, then there ought to have been an increase in the marriages at these ages in the years when the birth-rate was going up, and this is in fact what occurred. There is a curious parallel in the rise and fall of the percentage of marriages under twenty-one and the birth-rate. They reach a maximum somewhere about 1875. Of course, there is an element of fallacy in this comparison, because it attributes all the births to a particular period of married life, which we know is not the case; but it is rather interesting because the two things run quite parallel. I have here a table—1871 to 1910—showing the proportion of marriages at several age periods. At ages under twenty and under twenty-five this proportion quite definitely falls, whereas

the proportions over these ages go up. There is a variation in the actual year when the maximum has been reached, but the general trend is the same in all, I think.

Monsignor Brown. Do you think the figures of age are reliable as given in the returns—from very young people, I mean? In my own experience it is very, very common for people, in order to avoid trouble, simply to put in a notice and say "of full age," girls and young fellows too, to avoid the trouble of getting the father's consent. Local registers will bear that out.—*A.* Of course, that is an error which is very likely to be repeated year after year, and the effect gradually becomes extinguished.

Q. I was just thinking that the introduction of registers of marriage in Nonconformist and other places of worship and the large increase of the number of marriages at registry offices may be an important factor in that.

Dr. Stevenson. Besides, you are aware that in many cases the accuracy of registers is very questionable; you know how very loose the statements were in the early years, prior, say, to 1805?—*A.* All that will undoubtedly affect the apparent rate of movement.

Monsignor Brown. You know in the English law there is a very extraordinary provision, that if the father is living and of sound mind and withholds his consent, even if absent from home, the minor cannot legally get married. That is why so many get over the difficulty by saying at the Registry Office that they are of full age. No question is then asked about the father's consent. If a girl comes up and says she is eighteen years of age, she is asked if her father is alive, and if she says, "Yes," the Registrar will say, "I must have his consent."

Colonel Unsworth. It is the same in the Australian colonies.

Monsignor Brown. There was an Act, I think, in Lord Brougham's time, which was afterwards repealed, which gave the Lord Chancellor power to overrule what he considered the unreasonable refusal of the parents.—*A.* Is that universal in England?

Q. It is so in all Registry Offices; I do not know about the Established Church, although I rather think it does apply there also. The cases of hardship arising are sometimes very acute.

Dr. Greenwood. I should like to ask you if you could perhaps enlarge to us a little on the point raised regarding this periodic variation in the birth-rate. We have had evidence before in this Commission from Dr. Brownlee in

support of his contention that the artificial limitation of fertility is a very small factor in the declining birth-rate. I rather judge from this statement that you are inclined to endorse that view.—*A.* The number of births per 100 marriages in 1871–80 was 424, and then it began to fall off. In that period, between 1870–80, the crude birth-rate in Glasgow was falling from about 41 to 36, and at the beginning of the seventeenth century, as far as we can get it, the birth-rate was about 35. There is no possibility of ascertaining the number of births in relation to marriages at that period. The one point where you can get into touch with it is at the beginning of the eighteenth century; you will find the figure given as 417, 420 and 414. The number of births to marriages, therefore, in the beginning of the eighteenth century was fairly comparable with what was happening in the sixties and seventies of last century. Between those two periods, however, there came in Cleland's observation early in last century—where he said that out of a given number of marriages they would expect to have about 2000 children, and that, as a matter of fact, would only give 348 births per 100 marriages—a drop, as it were, from the level reached early in the eighteenth century, and also considerably lower than what happened late in the nineteenth century.

Q. All these figures relate to 1701–10, 1711–20 and 1721–30. Next you direct our attention to the figures of the nineteenth century.—*A.* Early in the nineteenth century the number of births per 100 marriages was lower than 100 years before, and also lower than happened 50 years afterwards.

Dr. Stevenson. Do you think the number of births in relation to marriages a satisfactory index to fertility? Surely the practice of going into a town to get married may vary from one period to another quite as readily as the birth-rate. I mean to say, we know people in country districts very largely resort to a church in the neighbouring town to get married, and those marriages would be registered in the town, although the people live in the country. Would not that probably apply in Scotland also?—*A.* I do not think in Scotland it would apply to any appreciable extent. A few marriages of persons usually resident in the country undoubtedly take place in the towns.

Q. You think you could answer for it with regard to two centuries ago?—*A.* I think the practice of home-marriages was prevalent in Scotland until quite recent years. Within my own recollection it was quite an exception to have a marriage in church.

Q. That would, of course, make the ratio a much better one in Scotland than in England?—*A.* Yes.

Dr. Saleeby. Am I wrong in supposing that that does turn upon the assumed accuracy of Cleland's guess about 2000? What was Cleland going on when he says, "Whereas the number of children . . . would amount to about 2000." What data had he?—*A.* He is representing, I think, the opinion of the time.

Q. It is all very shadowy, I think.

Dr. Greenwood. Was not his opinion affected by the Secession question?—*A.* I do not think so. I have quoted the figures for 1701–10, 1711–20, 1721–30. In the following decade, 1731–40, the births per 100 marriages dropped from 414 to 364.

Dr. Stevenson. Is there reason to suppose that Cleland was in possession of complete records of births and marriages at the time he spoke of the number of children that would be expected?—*A.* Well, I imagine he got them by comparing the records of adjacent parishes.

Q. In the absence of any indication of the ground upon which his information is founded, do you think it sufficiently precise to base a theory of the variation of the birth-rate upon it?—*A.* It is not a scientific basis, but it is valuable in the absence of other data.

The Chairman. In 1891–1900 it should be 356, I think, and not 306?—*A.* Yes; that is an error which has crept into the type.

Dr. Saleeby. At any rate, you do not want us to direct too much attention to this theory of a fluctuation in germinal activity?—*A.* Surely it has a bearing on the question.

Q. Certainly; I want to know what weight you personally attach to that theory, and therefore what weight you want us to attach to it?—*A.* Well, I put it alongside some figures I have quoted in the margin here; for instance, the birth-rate in Sweden went up from 31 to 34 between 1801 and 1821; and in Bavaria it went up from 33 to 40.

Dr. Stevenson. But is it not always possible that an apparent rise in the birth-rate represents merely an improvement in registration?—*A.* Quite true.

Dr. Saleeby. For instance, the recent rise in Japan; since the war there has been a sensational rise, which is of merely statistical origin.

Dr. Stevenson. All the countries in which you get rises occurring at the present time are, speaking generally, countries in which the registration system has been recently

developed?—*A.* So that greater efficiency in registration should be debited with all the variations that occur.

Dr. Greenwood. I think you would probably say, would you not, that the question of social conditions has some bearing on your theory? I mean, if it be not true that there has been a marked difference between the wealthier class districts and the poorer class districts in the rate of decline—if that be not true, then *pro tanto* it is a confirmation of your view as to variations in germinal activity?—*A.* I think one finds that the decrease of the birth-rate has some sort of relationship to the decrease in the death-rate; I mean if one takes a good-class district the decrease in both birth- and death-rates is less (although the rate of each is lower) than in districts of the opposite class.

Dr. Saleeby. That is a decrease on a lower figure?—*A.* On a lower figure.

Dr. Greenwood. You do not think the correlation has been so intense as some writers have suggested, between good social conditions and a declining birth-rate?—*A.* I do not find any evidence of it; I will not go farther than that.

Q. In the case of Glasgow it is not very marked?—*A.* Not very marked.

Dr. Saleeby. Does that statement quite coincide with your précis—that you find no evidence of a close correlation between good social conditions and a declining birth-rate?—*A.* May I put the matter in this way? I tried to get facts bearing on this question. One of the difficulties that always occur is change in administration areas. The only areas I could go on were the existing wards in Glasgow, and these only carried me back ten years. I had the number of females between fifteen and forty-five at two periods, 1901 and 1911; and I took two districts where the death-rate was pretty high and where the decrease in the birth-rate has been equal to 13 per cent.; whereas when I took two other wards at the opposite extreme with a low death-rate the decrease, on a low birth-rate, has been only 3 per cent. The contrast is this: the birth-rate per thousand married women between fifteen and forty-five in the two worst wards is equal to 161 per 1000, whereas the birth-rate of the two good wards is only 34; but the 34 per 1000 rate has fallen only 3 per cent., while the 161 has fallen 13 per cent. This is subject to the observation that it is based on a limited comparison and extends only from 1901 to 1912.

Q. What about the entire paragraph taking the average

birth-rate; the general significance of that paragraph is what?—*A.* That districts with high death-rates have increased birth-rate.

Q. Quite so; that is to say, the districts of the poor in social conditions?—*A.* Yes; I think you will find the actual figures stated in one of the tables.

Q. In other words, there is a considerable correlation between good social condition and fall in the birth-rate?—*A.* And a low birth-rate—not the rate at which it is falling.

Q. But this paragraph of yours deals with averages: "Taking the average death-rate as an index of the social conditions of the seven wards showing a decrease of over 2 per cent. in the birth-rate, only one had a higher death-rate than the city as a whole; of the nine wards when the birth-rate decreased between 10 and 20 per cent., four had a higher death-rate; of the six wards when the birth-rate fell less than 10 per cent., three had a higher death-rate; and two the same death-rate as the city." I suggest that the meaning of that paragraph is that there is considerable correlation between good social conditions and fall in the birth-rate?—*A.* You are quite right; it might be taken to mean that. Indeed, the next paragraph in the précis goes on to say: "At the most, therefore, it might be said that there is a tendency for those wards which have a death-rate above the city mean to gather round that end of the scale which shows either an increase in the birth-rate or a low rate of decrease."

Dr. Greenwood. I take it Dr. Chalmers' point is not that there is no correlation, but that in his experience the correlation is not of the kind of order that Professor Karl Pearson, for instance, has put about. You know his recent publication?—*A.* I have looked at it without having had time to study it.

Q. His view is that the decline in the birth-rate is purely economic; that wherever, for example, a change in industrial conditions has rendered labour impracticable in a particular district, the birth-rate has incidentally fallen, and in districts where no such change has taken place that fall has not occurred?—*A.* He calls that "the people's answer to restrictive legislation," I think.

Q. But as far as Glasgow is concerned the association between the two phenomena, although distinct, is not of such an order that one could put the declining birth-rate down purely to economic conditions?—*A.* Well, probably that is a recent statement of it, but my feeling is that where you have a very considerable drop in the death-rate,

there you also have a drop in the birth-rate to a larger extent than in districts where the drop in the death-rate was comparatively small, beginning on a very low basis. For instance, I may put it in this way : I am reading from a paper I read some time ago before the Epidemiological Society, and I was dealing there not with districts, but with the actual size of houses, because I took that as a better index to the social conditions than the average or proportion of houses of small size, and this was the contrast. The table shows that in the case of one-apartment tenements there was a decrease of 20·8 per cent.; two-apartment tenements, 22·5; three-apartment tenements, 16·0; and four and upwards, 3·6. Now that after all means, I fancy, that the more unfortunate of the population are having the death-rate reduced at a much greater rate than the better off, and that their birth-rates are also being reduced more rapidly.

Dr. Stevenson. And can you suggest any means of harmonizing a differential fall in the birth-rate with a theory of cyclical variation?—*A.* I am not quite sure that I could just at the moment. I do not suppose these affect populations uniformly at a particular period, but probably differentiate themselves. I mean that if a tendency gets established it does not develop or manifest itself uniformly and simultaneously, but you have it beginning and probably affecting several strata in succession.

Q. Affecting one stratum at one part of the wave and another stratum at another?—*A.* Becoming manifest at different times possibly.

Monsignor Brown. Or travelling from one stratum to another?—*A.* Yes.

Dr. Stevenson. On the theory of sophistication it is easy to explain, but as a natural phenomenon it is rather a big problem.

Dr. Saleeby. As a natural phenomenon I confess the phrase "fluctuation in germinal activity" conveys no idea to me whatever.—*A.* I will take any phrase that may be suggested if it expresses the fact that in Glasgow you had a drop in the beginning of the nineteenth century between a higher ratio of children per marriage in the eighteenth and also later in the nineteenth century. I have called it germinal activity.

Q. A drop which depends on the view we take as to whether Cleland's assertion was an accurate one?—*A.* It is based on that, but he was careful, so far as one has been able to discover, in regard to the statements he made.

Q. But in point of fact he gives no data for this?—*A.* He took his figures from the registers available.

Monsignor Brown. Do you think there would be any loss of record—that is to say, that marriages would not be registered at all that could have been at that time?—*A.* The parish registers are, I think, fairly reliable as a record of marriages, but some of the Secession Churches kept baptismal registers of their own people.

Dr. Saleeby. I should like to know more about this "germinal activity." You do not mean, for instance, sexual activity?—*A.* No.

Q. Do you mean, then, fluctuations in the number of spermatozoa produced?—*A.* I mean what one sees, for instance, without being able to explain it, in epidemic disease. For example, scarlet fever just now is probably quite as prevalent as ever, and yet the morbidity rate is very low.

Q. There is no doubt an analogy, but we have to get the thing down to some concrete image of what we suppose to happen. Are you thinking of numbers of spermatozoa and ova produced, or are you thinking of variations in the vital potentialities of those germ cells?—*A.* If I may revert to infectious disease as an illustration, we encountered plague for the first time in Glasgow, I think, in 1900, just at the end of the first Plague Commission in India; and we were told quite definitely that when rats took plague the first indication we would find of rat plague would be the discovery of dead rats. Now as a fact, although we searched diligently for dead rats, we did not find any, but what did happen was this: some boys had discovered a rat and started a rat hunt, and a rat ran up the effluent pipe of a smith's trough, the boys plugged the pipe and the rat was drowned. They knew we were looking for dead rats, and brought it to us. Now that rat had plague, but it was evidently not virulently affected, because innoculation failed to transmit the disease to another rat, but when the virus was reinforced by passing through mice other rats caught the plague immediately. That is the kind of thing I had in my mind when I used the phrase "germinal activity"; it is something you cannot reduce to numbers; it is a difference in the degree of vitality or activity.

Q. I wanted to know which of the two you were thinking of?—*A.* I do not know whether my plague analogy makes it clearer.

Q. Oh, I quite follow the analogy.

Dr. Greenwood. Could you suggest any way in which

we could test this point at all in the form of statistics?—*A.* Well, local statistics to some extent are limited; we do not have age distribution, and that is one factor in the matter. Another element is that the proportion of women in the country is less than it was fifty years ago; I mean in relation to males. In 1861 Glasgow had 111, 121, 121 and 118 females to 100 males at successive age periods, and now we are down to 104, 111, 117. That, I think, must also have a bearing on the matter, but what the precise effect is at the moment one does not know, unless it is that it lessens the area of selection.

Q. Is that change in Glasgow at all comparable to a national change? Is that how the numbers have been altered in the last half-century in the nation generally? Surely not?—*A.* It has varied, but I am not quite sure that the difference is so great.

Dr. Stevenson. I should have thought in England the change, if any, would have been in the opposite direction.

Dr. Saleeby. So should I.—*A.* Do you mean an increase in the number of females?

Q. Yes.

Monsignor Brown. Born, or surviving?—*A.* The figure I gave refer to women living at certain ages.

The Secretary. Are there any local industrial conditions to account for that in Glasgow?—*A.* No; I cannot explain it on the ground of industrial conditions. The fall began early between 1861 and 1871 practically.

Dr. Stevenson. Another point is that in dealing with the postponement of marriage you suggest that as contributing to a considerable extent to the decrease in the birth-rate. No doubt it has done so, but I should like to know if you have considered the extent to which the increased proportion of females of child-bearing age in the population would, other things being equal, have increased the birth-rate—whether that is not a set-off against the postponement of marriage?—*A.* The increase of females of child-bearing age?

Q. Yes; since the birth-rate has fallen there are far fewer children in the population, and the adults of child-bearing age as yet have benefited. As time goes on, of course, the wave will pass further along, and we will get a largely increased proportion of old people, but at the present time the effect is that women of child-bearing age are a considerably larger element in the population than when the birth-rate was high?—*A.* You mean the population is getting older?

Q. Yes.—*A.* When I took out the 1911 census I think we had not increased up till age twenty-five; the increase in our females was at later ages.

Q. Quite so; the young people have gone down. It is about twenty-five where you get the change. Of course, ten years ago it was ten years earlier?—*A.* That falls into line with Tait's formula, where he said that the potential fertility fell from something like 41·48 to 30 at ages after twenty-five, using Matthew Duncan's figures.

Q. Surely one cannot speak of the fall in the birth-rate as being contributed to by the natural changes that have occurred in the habits of the people, and so forth, unless one takes into account all of these changes. One of them is postponement of marriage and to some extent the decrease in the marriage rate altogether, but another is an increase in the proportion of women of child-bearing age?—*A.* But not at the most productive ages.

Q. Oh, well, ten years ago it was at the most productive ages, and in any case the period 25–30 is quite as important as 20–25, because although the earlier period is more fertile, the later period has much more marriage?—*A.* Yes. There were some fluctuations in the seventeenth century in the number of baptisms (and I rather think that in that period baptisms were pretty regularly recorded), although the population almost doubled between the years 1611–1660. For instance, the number of baptisms in 1611 (the year of which I gave you the birth-rate as 35) were 268; then during the next six years, or rather in the fifth year after that, they fell to 296; then two years afterwards they went up to 560. Coming to 1660 you get a high figure again, but for the three following years they had fallen off again. So that even within those limits there were fluctuations.

Dr. Saleeby. I want you to remind us of your paper on ante-natal hygiene, and its conclusion that we ought to have registration of still-births, because these are practical matters on which we want to add your voice to other people's. You attach great importance to the factor of mortality before birth?—*A.* I do, personally.

Q. And you would suggest we ought to register still-births?—*A.* Yes.

Q. As hosts of witnesses have before you?—*A.* Yes. I have suggested that before two Commissions.

Q. May I ask what you think we ought to do? We are getting now rather through our witnesses, and we are going to have to recommend something. What have you got to advise us? What do you want this Commission to

recommend to the State, or to the public, or to the Churches? We are here for a practical purpose.—*A.* If you take that paper you have referred to at another point, what impresses me at the moment is the enormous mortality of the children of marriages where still-births occur. For instance, I say: "The fatality which haunts these families is not fully represented in the foregoing, for I find that the 1,337 mothers of still-born children had in the past borne in the aggregate 4,582 living children, of whom 833, or 182 per 1000 births, died in their first years, and 1,485 altogether, or 32 per cent., were dead prior to the birth of the still-born child which led to the inquiry." I do not think you can do anything legislatively that will increase the birth-rate, but I think you may do a good deal to increase the number of living children if you do something to reduce the infant mortality before as well as after birth.

Q. You do not think we can legislatively do anything substantial to raise the birth-rate?—*A.* Quite so.

Monsignor Brown. You do not think economic conditions play any sufficient part to warrant any interference?—*A.* That is another matter. For instance, that rise in the birth-rate shown in the chart was coincident with industrial progress in England, and it was the same in Scotland; there is no question about that.

Dr. Saleeby. But on the other hand, when you compare different rates of wages and so forth, you often find the birth-rate lower where wages are higher?—*A.* That is just the other aspect of the question of social conditions.

Q. So it is by no means certain what your economic legislation might do; it might have the painful effect of giving you fewer children than ever.

Monsignor Brown. I was alluding to other things—the housing question, for example, and the restriction thus put upon families?—*A.* I quite frankly think this country has in front of it the housing question; it has to deal with that after this war is over; it is one of the most pressing social reforms.

The Secretary. The Commission is very much obliged to you for coming, Dr. Chalmers.

The Witness withdrew.

Meeting.—December 11, 1914.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. T. H. C. Stevenson, Superintendent of Statistics, General Register Office.

The following statement was considered, having been circulated in advance to the members of the Commission.

It is unfortunately impossible to present to the Commission, as it was hoped might by this time be done, a general account of the results of the recent census inquiry into the question of fertility, but I have obtained the consent of the Registrar-General to submit to the Commission a few sample results which have been taken out specially for the purpose: and attention may also be directed to the facts as to fertility and infant mortality in 1911, with distinction of parents' occupation, which have been already published, and to the altered aspect of the birth-rates of certain communities when re-stated in such a way as to allow for the numbers and ages of the married women contained in them.

To deal with the latter matter first, the method of re-statement referred to was described in a paper contributed in 1905 by Dr. Newsholme and myself to the Royal Statistical Society and printed in its Journal. At that time such standardized birth-rates were shown for the years 1881 and 1903 for a number of areas. Further results have now been taken out for some of these for the year 1911. In this way it may be shown that whereas this rate, which may be taken to represent fertility in proportion to opportunity, had in the case of England and Wales fallen from 34·65 in 1881 (it had stood at much the same level for many years before) to 32·6 in 1891 and 28·4 in 1903, it had further fallen to 24·7 in 1911. A fall of 6 per cent. during 1881–91 was followed by one of 13 per cent. in the twelve years 1891–1903, and that by a further fall of 13 per cent. in the eight years 1903–11. The decline in fertility is therefore continuing with increasing speed. A diagram illustrating this point is handed in, and on it are also plotted the corresponding facts for Connaught.

The case of Connaught well illustrates the need for standardization of birth-rates if they are to be used as an index of fertility. The birth-rate there per 1000 total population, 22·3 in 1911, is a little below that of England and Wales, but owing to the remarkably small proportion

of young married women in Connaught this rate has to be more than doubled if a comparative statement of fertility is desired, the standardized rate for Connaught in 1911 being 45·3 as against 24·7 for this country. The diagram also brings out the remarkable fact that fertility in Connaught has in the most recent years risen with even greater rapidity than that which has characterized its fall in this country.

The increase in Connaught is shared by all the Irish provinces except Ulster, where the decrease from 1903 was very slight. For Ireland as a whole the rate rose from 36·1 to 37·0, while that for England was falling from 28·4 to 24·7, and for Scotland from 33·4 to 29·7. In view of these very great differences in fertility in the United Kingdom and the different tendencies they display it is difficult to regard the fall in Great Britain as resulting from cyclical change in natural fertility, since in that case the phase of diminution here is accompanied by one of increase in Ireland. A much more natural explanation of the phenomena seems to be that artificial restraint has become more prevalent in England, whereas the Irish increase represents the natural result of increased prosperity in the case of a population amongst whom the religious bar to such restraint is effective.

In England and Scotland every town for which the rate has been calculated shows a considerable fall in 1911 as compared with 1903, but the differences between the fertilities of neighbouring communities are sometimes such as to suggest that they are not entirely dependent upon natural causes. Thus, to take two towns in a single county, Hull in 1911 had a rate of 26·1 as against 17·95 in Bradford, whereas thirty years earlier their rates were almost exactly the same, 31·0 in Hull and 30·6 in Bradford. I find it difficult to conceive of a natural cyclical change reducing the fertility of Bradford by 41 per cent. while it only reduced that of Hull by 16 per cent.

Of the English towns for which the 1911 rates have been taken out, Bradford gives the lowest, and next to it come Bournemouth (18·4), Halifax (18·7), Huddersfield (19·3), Blackburn (20·1), Burnley (20·3), and Brighton (21·2). It seems to me significant that these are either textile towns where the conditions of life impose a direct financial penalty on motherhood or residential towns with an exceptionally large middle-class element in their population.

If the London boroughs are classified according to social status (as indicated by proportion of servants to population), we find that, speaking generally, fertility decreases with prosperity, but the difference is far greater between the

poorest class of borough and that next above it than elsewhere, and the most prosperous group but one of the six groups (Paddington, Marylebone and Chelsea), shows a greater fertility at least in 1911 than the group (Wandsworth, Lewisham, City of London) immediately below it in prosperity. This departure from the inverse order of prosperity accords with the fact that, as will be seen from the census fertility results, fertility decreases as the number of rooms in the tenement increases until six rooms are reached, but not beyond that point.[1] In other words, the lower middle class is apparently no more fertile than the classes above it in the social scale, all being about equal from the class that can afford a tenement of six rooms (in early married life) upwards.

The towns with greatest fertility in 1911 amongst those in Great Britain for which figures have been taken out are Glasgow (29·3), Liverpool (29·3) and West Ham (29·0)—all ports. The rates in Scotland run very much higher than in England, though showing almost as great diminution since 1902 or 1903. The North-West division of Scotland (Ross and Cromarty and Inverness) can still show a rate of 34·8; and the Northern (Orkney, Shetland, Caithness and Sutherland) of 33·0; so the "Celtic Fringe" generally seems far more fertile than the Saxon.

It is sometimes suggested that the fall in the birth-rate is due in large measure to diminution in, and postponement of, marriage. On this point the following table may be quoted from the Annual Report of the Registrar-General for 1912—

ENGLAND AND WALES: THE EFFECTS OF VARIOUS FACTORS INFLUENCING THE FALL OF THE BIRTH-RATE, 1786–80 TO 1912

	Birth-rate		
	Total	Legitimate	Illegitimate
Potential effect of increased proportion of women aged 15–45 in the population .	+ 2·86	+ 2·72	+ 0·14
Potential effect of decreased proportion of married total women aged 15–45 .	— 1·10	— 1·16	+ 0·06
Effect of diminished fertility . . .	— 13·29	— 12·43	— 0·86
Recorded fall 1876–80 to 1912 . . .	— 11·53	— 10·87	— 0·66

This table shows that while it is true that relatively fewer women of fertile age are married now than formerly, the effect of this fall is much more than offset by the considerable rise in the proportion in our population of women of fertile age resulting from the fall in the birth-rate and the conse-

[1] But see the modification of this statement on p. 368–9.

quent decrease in our proportion of children. The net result of the changes dealt with in the table, therefore, somewhat masks the true fall in fertility. The increase in average age of the married women under forty-five years old is neglected in the table, but it is not great enough to modify the figures very materially, as is shown by the fact that the standardized fertility rate, in which this factor as well is taken into account, shows a fall during the same period of a little over 10 per 1000.

Occupational Fertility and Infant Mortality.

The births registered in England and Wales during 1911 were for the first time classified according to parents' occupation—the father's for legitimate, and the mother's for illegitimate children. The results in some cases require to be interpreted with caution, since the description of occupation, always a very difficult matter, is on the whole better and more definite in the census schedules than in the birth registers. On this account the returns under the more definite headings are relatively more numerous in the census from which the occupational populations are derived, than in the registers which form the source of the birth figures to be related to them, and *vice versa*. It is possible, however, by appropriate grouping of headings known to be affected, to get over most of this difficulty, and in many cases it does not exist at all.

The population was divided by occupation into five groups of varying social status, the three great groups of miners, textile workers, and agricultural labourers being dealt with separately. Class 4 contains some skilled and some unskilled workmen, as the census classification does not always permit of the distinction being drawn; and similarly Class 2 is a mixture containing some elements properly belonging to Class 1 and some to Class 3.

England and Wales, 1911: Legitimate Fertility and Infant Mortality in relation to Social Status, as indicated by Father's Occupation.

	Fertility (*a*) per 1000 males aged 10 years and over	Fertility (*b*) per 1000 married males aged under 55 years	Infant mortality
1. Upper and Middle Class . .	47	119	76·4
2. Intermediate Class . . .	46	132	106·4
3. Skilled Workmen	73	153	112·7
4. Intermediate Class . . .	70	158	152·5
5. Unskilled Workmen . . .	90	213	152·5

The figures for the three occupations treated separately were—

Textile Workers	50	125	148·1
Miners	107	230	160·1
Agricultural Labourers . . .	49	161	96·9

It will be seen that fertility and infant mortality rise very regularly as we descend the social scale.

Full particulars of this tabulation have been published in the Annual Reports of the Registrar-General for 1911 and 1912, and the results for only a few specimen occupations can be quoted here—

Occupation	Fertility (*a*)	Fertility (*b*)	Infant mortality
Medical Practitioners . . .	52	103	39
Solicitors	45	100	41
Clergymen (C. of E.)	39	101	48
Dock Labourers	115	231	172
Earthenware Makers	84	181	172
Costers, Hawkers	73	175	196

It is scarcely necessary to comment on these figures: the educated and comfortable classes have few children, of whom, under the favourable conditions provided, few die; unskilled labour produces many children, and loses a large proportion of them. The two methods of stating fertility employed have to be considered according as we desire to ascertain the extent to which a class reproduces itself, including the extent to which, and the age at which, it marries (col. *a*), or merely its fertility after marriage (col.

Census Fertility Results.

In 1911, for the first time in this country, all married persons were required to state the number of their children, living and dead (exclusive of still-births) and the duration of the marriage. The results of the inquiry have been published for Scotland and Ireland, but not yet for England and Wales, for which the tabulation is being carried out in greater detail. However, it has been possible to prepare certain specimen tables for the use of the Commission.

In addition to the tabulation of the fertility and child mortality of the whole population by full detail of combined ages of husband and wife at marriage and duration of marriage, similar tabulation, but in less detail of age and duration, has been carried out for the population classified

according to (*a*) number of rooms in tenement, (*b*) husband's occupation, (*c*) geographical area, (*d*) urban or rural nature of birthplace of both parents, and of their place of residence. The fertility of wives returned as following a gainful occupation will also be tabulated according to the wife's occupation.

The only points which can now be dealt with are derived from the tables relating to size of tenement and husband's occupation.

Size of tenement

In the table submitted only marriages of less than two years' duration are included. Consequently the fertilities shown are liable to prejudice by ante-nuptial conception, which probably, as can be shown from the occupational figures,[1] affects the smaller tenements more than the larger. They may also be especially liable to prejudice by wilful over-statement of duration where one or more children have been born before and soon after marriage, but in such cases, which cannot form a large proportion of the whole in any class, the statement made may correctly represent the duration of the union, which in the more common case is defined by marriage. On the other hand, the first two years' duration possesses special interest in this connection because their child mortality is very similar in regard to age to infant mortality as usually studied, and because the presumption is admissible that the births and deaths of the children have taken place in tenements of the same class as those occupied on census date.

The following facts may be gathered from the table.

1. Fertility for any given age of husband decreases steadily with age of wife.
2. Fertility for any given age of wife is little affected by age of husband, but is somewhat greater for very young husbands.
3. Fertility decreases regularly as the size of the tenement increases till six or seven rooms are reached, and thereafter remains constant.[2]
4. Infant mortality decreases regularly as the size of the tenement increases, being for tenements of ten rooms or more less than half the average and less than one-third of that in one-room tenements.

[1] See page 358.

[2] This holds good for duration of marriage 0–2 years, but not for duration 15–20 years, in the case of which fertility falls throughout as the size of tenement increases.

5. The saving of infant life in the more comfortable tenements compensates to but a slight extent for their lower fertility.
6. There is a very definite relationship of infant mortality to age of wife in the case of these short-duration marriages. Dealing with all sizes of tenement and all ages of husbands the child mortality for wives under 20 at marriage is 104; under 25, 77; under 30, 61; under 35, 64; and under 45, 84. Thus the first child of a mother aged 25–35 at marriage had a much better chance of survival than that of either a younger or an older woman. This rule is of general application whatever the size of the tenement.

Occupations.[1]

Tables showing fertility and child mortality by age of wife at marriage and duration of marriage have been constructed for the following eight occupations: clergymen (Church of England), medical practitioners, teachers, farmers, carpenters, boilermakers, coal-miners and agricultural labourers. For the two last and the first of these occupations rates were also calculated distinguishing husband's age at marriage in addition to duration and wife's age, but so little of interest results from this distinction that it need not be further referred to.

The first series of tables gives for each of the eight occupations the number of children born and of children surviving per 100 families, and the number of children dead per 1000 born in each of 25 groups distinguished by age of wife at marriage and duration of marriage. The tables include only women of fertile age (under 45 at census) as they are intended to elucidate only the present state of fertility and not its past history. The age at marriage, obtained by deducting duration of marriage from census age, can only be determined within two years. Thus a woman aged 39 years (39–40) at census and ten (10–11) years married may have been any age between 28 and 30 at marriage. The average age of such women would be about 29, and the headings of the age columns in the tables refer to such average ages, the first column including wives up to average age 19 (*i. e.* 18–20) at marriage; the second all from average age 20 (*i. e.* 19–21) to 24 at marriage, and so on. There is thus a certain amount of overlapping in these age groups, but it only affects their borderlands, and cannot prejudice the results to any serious extent.

The tables show great differences between the occupations,

for the more convenient study of which the rates of total and effective fertility (the latter term being used to signify proportional number of surviving children) have in a second table been converted into percentage form, indicating their ratio to the similar rates for the total population.

Even in this form, however, the picture presented is too complicated to admit of its general effect being readily summed up, and the general combined result of the various rates shown for separate sections of each occupation has, therefore, been stated in a single figure which represents for each occupation the number of children, born and surviving respectively, which would result from the application of the rates in question to the married couples of England and Wales (with wife aged less than 45 at census), distributed as the latter are over the twenty-five combinations of duration and wife's age at marriage. In this way the inequalities of age and duration between the different occupations are eliminated and their fertilities can be compared as if the members of each had been married for equal periods to wives of equal ages. For further convenience of comparison these results are stated in proportional form, taking the rates for the whole population as 100. These may be referred to as "comparative Family Figures." They are given both for all durations and for the seven groups of durations employed in the tabulation in the table on page 358, from which the diagram shown has been prepared.

From this table it can be seen that, apart altogether from the fact that the members of some occupations are married in greater proportion and to wives of younger age than those of others, their fertility under equal conditions as to marriage differs very widely. That of coal-miners is very nearly twice that of doctors, and for the marriages offering the greatest opportunity of fertility is considerably more than twice that of doctors. The three professional occupations are fairly closely grouped at the bottom of the list, the interval separating them from the next lowest on the list being much the largest in the table. This position is somewhat improved when allowance is made for the smaller mortality of their children, but even then they remain considerably below the other occupations. In only one case does the order of surviving families differ from that of total families (in the all durations table), the advantage in total fertility of boiler-makers over farmers being more than wiped out by the greater mortality of their children.

In spite of the considerably greater fertility of coal-

CENSUS 1911

COMPARATIVE FAMILY FIGURES

Occupation	Duration of Marriage															
	All Durations		0–2 Years		2–5 Years		5–10 Years		10–15 Years		15–20 Years		20–25 Years		25–30 Years	
	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving	Total	Surviving
General population .	100·0	100·0	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Coal-miners . . .	126·4	120·2	128	126	120	116	124	118	128	112	130	133	126	120	120	116
Agricultural labourers	113·4	119·6	123	124	115	113	115	119	114	119	115	122	110	119	105	115
Boilermakers . . .	110·1	107·3	110	108	108	107	110	108	110	107	111	108	110	107	116	110
Farmers	100·5	109·1	95	98	107	112	108	115	101	110	98	107	94	104	85	97
Carpenters. . . .	95·3	98·7	97	99	97	99	95	98	95	98	95	99	95	100	98	100
Clergymen (C. of E.) .	72·0	82·0	72	75	87	93	84	83	73	83	67	75	58	67	63	71
Teachers	70·3	76·1	68	70	75	79	74	80	70	76	68	74	58	73	74	80
Doctors	64·7	72·1	85	90	83	89	78	84	64	72	57	64	52	60	56	59

miners they have few more surviving children than agricultural labourers, with whom child mortality is much lower.

The first duration group results are doubtless affected in differing degrees by ante-nuptial conception. This will explain why the gap between, *e. g.*, miners and clergymen is much greater for marriages of 0–2 than of 2–5 years' duration. With this exception the differences in fertility tend to become accentuated as the duration of marriage increases. This might be explained, no doubt, as due to earlier cessation of fertility in those occupations where its level in early married life is lowest, assuming the differences shown to be physiological. An explanation which appeals more to me personally is that where a smaller number of children is desired their production ceases after the desired number is obtained.

In this connection the behaviour of the three professional groups is interesting. Doctors start off with a higher fertility than clergymen and finish with a lower, while teachers start with a lower and finish with a higher.

In conclusion it may be pointed out again that these figures tell only a portion of the tale. Amongst the occupations dealt with, no doubt those that are most fertile, after allowance has been made for inequalities in proportions married and ages of wives, also marry to a greater extent and with younger women. It would be very desirable to have comparative figures taking these circumstances into account and compensating only for inequality in age of the men in the various occupations, for such figures would show, as those here presented cannot, the relative extent to which the various occupations are actually reproducing their kind. Such figures can readily be obtained, but will require tabulation not as yet carried out.

The Chairman. You say that the birth-rate has stayed at very much the same level for many years. I suppose it rose until 1876?—*A.* I do not think we can lay any stress on that slight recorded rise, because no doubt the efficiency of registration was being improved during the period. It was in 1875 that registration first became practically compulsory. It had been nominally compulsory from the first, but there was no penalty until the Act of 1874; and I think it is hard to say whether the slight rise that is shown in the figures is more than what represents gradual improvement in the degree of registration.

Q. Still it did reach thirty-six odd in 1876?—*A.* 1876 was its maximum year.

Q. How do you arrive at the standardized birth-rate in Connaught? I should have thought the only way to do that would be to follow the young men to America and see how many children they had.—*A.* The method is one of handicapping each population by a factor that compensates for the greater or smaller proportion of married women of fertile age contained in that population. Well, in Connaught there are comparatively very few young married women; so much so that the factor necessary to compensate for the abnormality of the population in that respect is something a shade over two; and that increases an actual recorded rate in Connaught from about 22 up to a standardized rate of 45.

Q. That only affects those who are left behind. You cannot tell whether those who go to America are equally fertile?—*A.* No, we do not deal with those at all. The method compares the fertility of women in Connaught, without respect to their birthplace, with that of women in other parts of the country. I may say that I have here a diagram which shows the movements for a few countries.

Q. The German Empire is going downhill rather more rapidly than we are?—*A.* Quite so, and the fears as to the future overwhelming population of Germany in the light of a diagram like this appear to be somewhat exaggerated.

Monsignor Brown. Unless they are Slavs; that is what the Germans have at the back of their minds, the idea that the Slavs are coming in to replace them because they are more fertile.—*A.* This is for Germany as a whole, including its Slav element.

The Chairman. If you excluded the Slav element it would be much more striking.—*A.* This is the change that has occurred. The change occurred later with the German than with ourselves. Up to 1891 they were holding their ground; the fertility was, if anything, slightly rising, but since then, especially since 1903, it has been dropping.

Q. I suppose it is very difficult to get statistics for the Slav people—they are the people who are populating Germany you say?

Dr. Saleeby. Can you compare Hamburg and Warsaw?—*A.* Hamburg is very low indeed, and so is Berlin, but I have not the figures for Warsaw.

Mr. Hobson. The Russian population is more rural than the German.

MONSIGNOR BROWN. Except where they come into the industrial areas.

MR. HOBSON. But then the birth-rate may fall.

MONSIGNOR BROWN. Not so much. That is what the Germans are frightened of; the Slavs in Silesia are so prolific.

THE WITNESS. We are badly off for figures for Russia, but the last recorded birth-rate for Russia, the crude rate, is 44, and they have been 49, and so forth. They apparently in the last few years have been going down too, somewhat. They have a death-rate of 29.

MR. HOBSON. What is our death-rate?—*A.* Thirteen or fourteen. In addition to the contrasts of Ireland and England and Connaught and Ulster and Hull and Bradford, which have been pointed out, I might have referred perhaps to the fertility of the French in Canada, and of the French in France, a very well-known example, of course; and we were also reminded by Dr. Greenwood a week ago of the contrast between Shoreditch and Hampstead. So I think that in those kindred populations one cannot suppose that a cyclical change is working in one way in one place and in another way in another place.

DR. SALEEBY. Is there anything in your statement about the Jewish question?—*A.* No.

Q. Because a good deal of what you have been saying has a sort of religious correlation with the birth-rate which we have not perhaps paid sufficient attention to.—*A.* It is easy to get that with regard to the Roman Catholic religion, but it would be very difficult with regard to the Jewish religion.

Q. But have you any data of Jewish birth-rates?—*A.* No, we have no information as to religion for Britain.

THE CHAIRMAN. Should not we find the standard of living had more to do with it than the religious faith? The Roman Catholics in France and Belgium are not at all prolific?—*A.* I speak subject to correction, but the way I explain it to myself at all events is that Roman Catholicism is a more potent force in the lives of the Irish people than in the lives of the French people. Do you think I am right?

MONSIGNOR BROWN. Certainly; perfectly true.

DR. SALEEBY. And in those of the French-Canadians than of the French in France?—*A.* I should think so.

PRINCIPAL GARVIE. Has not the French land system and so on in France something to do with it?

MONSIGNOR BROWN. Yes. But on Dr. Stevenson's point

as to the religious influence, it would be incomparably less in France than in French-Canada and Ireland.

Mr. Hobson. You say that, speaking generally, fertility decreases with prosperity?—*A.* That is in the London Boroughs.

Q. But it is a fact that such is not always the case?—*A.* Both are facts. In London you do get an inverse relationship; and in Connaught with the increased prosperity brought about by the Congested Districts Board, and the compulsory sale of land and so forth you have a large increase in fertility.

Q. But the principle that fertility decreases with prosperity is not peculiar to London?—*A.* It applies to English society throughout. The fertility of the more prosperous classes is certainly much lower than that of the less prosperous. That is shown by the occupational returns.

Principal Garvie. Although it has to be qualified by local conditions such as the difference between Hull and Bradford?—*A.* I have no theory to adduce for the difference between Hull and Bradford. Generally speaking seaports seem to have high birth-rates for some reason.

The Chairman. As to the costers and dock labourers, they are, I believe, purely impartial between Protestantism and Roman Catholicism?—*A.* I think the Irish element among dock labourers would be very strong, especially in Liverpool.

Monsignor Brown. Yes, they are, and also Cardiff, Swansea and Bristol; but costers are an indigenous population, a very remarkable people?—*A.* Yes, I see the dock labourers are much the most fertile of the three occupations quoted as showing high fertility—dock labourers, earthenware makers and costers; and they are just those containing the largest Irish element.

Dr. Saleeby. Have you reached any broad and safe conclusion as to the rate at which the classes are reproducing themselves?—*A.* The necessary tabulation is not yet done.

Q. Then can you give us anything definite by way of protest against these returns—about the birth-rates which take no cognizance of death-rates?—*A.* I am afraid I cannot support you there, because we have shown the figures both for total families and surviving families, and the figures show that the greater survival amongst the better-to-do classes goes only a small way in compensating for their lower birth-rate.

Q. That is just what I want. Thank you very much. I see.

THE CHAIRMAN. I am rather surprised that the clergy do not show better. I thought restriction was much less practised by them—perhaps they marry rather late?—*A.* That is eliminated by the method. It refers to standardized families—it equalizes all occupations in regard to the time of marriage. If the time of marriage and the age of the wife were taken into account the contrasts would no doubt be far greater, because not only does the doctor or the clergyman have fewer children after he is married to a wife of a given age, but he marries later, and in the case of the clergy, at all events, marries considerably less.

DR. SALEEBY. You have a certain dysgenic process going on comparable with what Galton described with regard to celibacy in Spain?—*A.* Selection for celibacy?

Q. Exactly.

DR. GREENWOOD. Could you explain the last paragraph of your written statement further?—*A.* The table a little before that gives the " comparative family figures " which I am putting forward as a measure of fertility for men who are equally married in the different occupations. Assuming equal conditions as regards age of wife and frequency of marriage, there would be these differences in fertility. We see that under these conditions the doctor, to take one end of the scale, has a family of only 64·7 per cent. of average as against the coal-miner with a family of 126·4 per cent. at the other end of the scale, for all durations of marriage—roughly half. Well, not only is there that difference in fertility after marriage to wives of equal age, but there is also the fact that the doctor marries later and marries an older woman than the coal-miner does, and very possibly marries less; I am not sure.[1]

PRINCIPAL GARVIE. The difference would be even greater?—*A.* The difference would be considerably greater. But while the rate I have in mind would be crude in a sense, it would be corrected for differences in age between men following different occupations. There would be no use in comparing fertility of curates, say, with bishops, because the bishop has had a much longer opportunity; and similarly in any class. Where the age distribution is naturally high you must expect, other things being equal, a larger family. But such a rate would be uncorrected except for age distribution.

[1] The proportion married is greater for coal-miners (workers at the face) up to and including the age-group 45–55, but beyond that is greater for doctors. See Census Report, Vol. X. pt. i. pp. 480 and 482.

Dr. Greenwood. Do you contemplate in the ultimate tabulation doing anything on semi-actuarial lines; I mean predicting what is the probable output in each class of children?—*A.* I think we must leave that to the Lister Institute, but we shall publish our facts pretty fully, I hope. They will be open to any workers.

Mr. Hobson. May I turn again to your statement that fertility decreases as the number of rooms and the tenement increases until six rooms are reached, but not beyond that point?—*A.* I have modified that statement.

Q. Yes, I know, but I do not think the modification affects the point I was going to put to you. I was going to ask you if the upper and middle classes corresponded roughly with the class above six rooms?—*A.* I should say above five rooms.

Q. You have no figures breaking up that upper and middle class?—*A.* No. Really when one comes to work upon these figures, one is very much impressed with the small numbers in the upper and middle class.

Q. It is hardly a safe basis?—*A.* If you begin breaking it up the degree of authentication for any conclusion becomes decreased enormously.

Q. The intermediate class there would be still a class living in fewer than five rooms?—*A.* I have explained as to the intermediate class. It is really an immense class, consisting partly of middle class and partly of the better working class.

Q. It would depend on the part of the country as to how many rooms they have?—*A.* To a certain extent, no doubt. The existence of such a mixed class is really a result of the inherent difficulties of the census of occupations. For instance, take the shopkeeping class. We cannot distinguish in the census returns between a small shopkeeper who may be quite working class and the proprietor of the largest shop in the country. It is people of that sort who go into the intermediate class, because they include members of both the middle and working classes; but the fact that they are intermediate is shown in the run of the figures, because in each case they come in between the two—they are composed of a mixture of the two.

Q. So that when you speak of the educated and comfortable classes as having few children, you virtually mean the classes corresponding to Class 1?—*A.* Well, the statement really holds good throughout.

Q. But not above the six; it stops virtually at six?—*A.* For the first two years of duration, but not for the

fifteen to twenty years' duration. I think you have had the diagram on that point. It shows fertility at fifteen to twenty years' duration in tenements of different sizes; and you see that the fall continues throughout as the size of tenement increases.

Q. Yes; that is very interesting.—*A.* And on this diagram (relating to occupations) there is evidence on that point too, because the occupations which have small families cease having children earlier; they have more in proportion in the earlier years of their marriages and fewer in proportion in the later years of their marriage. It is as if they started off with the idea of having three or four children, and that when they got them they ceased. I would like to call your attention to the way in which the relation to each other of the standardized families for the occupations tabulated varies with the duration of the marriage. Starting with duration 2–5 years—since the differences between occupations are increased for duration 0–2 by ante-nuptial conception—we find that the excess in fertility of the more fertile occupations is comparatively moderate. As the duration of the marriage increases, however, the differences in fertility also increase until in the later durations they become extreme. [This point was illustrated by a diagram.]

THE CHAIRMAN. Yes, I see. It is very interesting.—*A.* Until you come to this sort of thing where the doctor has very much less than half the family average of the coal-miner.

MONSIGNOR BROWN. The doctor is dying out as a class!—*A.* I do not know about that. And the differences between different occupations in that respect are curious. The doctor starts off with a rush; for a professional man he has quite a large family in the first few years of marriage. The doctor starts ahead of the clergyman and brings up well behind him. The teacher starts behind the clergyman, but he brings up in front of him.

DR. SALEEBY. Can you correlate that with the age of the mother?—*A.* This all takes the age of the mother into consideration. It is standardized—the age of mother at marriage.

Q. But I mean the age of the mother at which children were produced?—*A.* No, the census did not ask that; it only asked, "How long married?" "How many children?" and "How many still alive?"

THE CHAIRMAN. I should like to ask this question: is it not possible this might be partly physiological, taking as a fact that so many ladies of the upper classes do not rear their families themselves?—*A.* I would rather express

no opinion one way or another as to that; what I have aimed to do is to bring out the facts. I point out some reasons why it appears to me that the whole thing cannot be physiological; but as to saying whether there is a physiological element in it or not, I should be sorry to commit myself to an opinion one way or another.

Principal Garvie. There would be an economic factor? —*A.* I would commit myself to the economic factor, but not the physiological factor.

Dr. Saleeby. This starting off with a rush and then stopping—that means in certain classes that there will be very few children born to elderly mothers?—*A.* Well, of course, the mothers in those occupations marry later, so that the thing tends to even itself out as between different occupations.

Monsignor Brown. You think she bears up to the limit of fertility in many cases?—*A.* The figures indicate that in the middle classes at least child-bearing very frequently ceases before the wife is forty-five years old.

Dr. Greenwood. But if you take two classes; say the doctors and the teachers, which are fairly alike, perhaps, as to the average age of marriage, if one of them falls off much sooner than the other it would be a fair inference that there were in that occupation fewer children of elderly mothers?—*A.* Yes, provided the age at marriage is much the same; but I had in view the fact that fertility ceases earliest in the professional classes, where the women marry late.

Q. But you find a difference between the two professional classes, namely, clergy of the Church of England and doctors? —*A.* Yes, but still they are minor differences as compared with the differences between the doctors and the working-classes.

Dr. Saleeby. But take the birth-rate among women over forty, what can you tell us about the class distribution of that birth-rate?—*A.* I do not think that I can tell you anything positively from these figures because, as I say, we have no information in the census returns; all we know is that a couple of a certain age have had so many children.

Monsignor Brown. They may not even be single births? —*A.* No, they may be twins.

Dr. Saleeby. I suppose the probability of birth amongst what we call the middle and upper classes is more in the middle period of fertile age; and that among the lower classes you get a much larger proportion of children born to very young as well as to elderly mothers?—*A.* You certainly get a much larger proportion born to young mothers.

We seem to be reaching the conclusion that the age distribution of the mothers in the upper class approximates nearly to the optimum maternal age?

Mr. Hobson. The average of them.

Dr. Saleeby. I do not know how to put it exactly, but you know what I mean.

The Witness. From the point of child mortality?

Dr. Saleeby. Yes, that more in the upper and middle classes are born to mothers, say, between twenty-five to twenty-nine, than in the lower classes?—*A.* Yes, I dare say it would work out so, but we cannot tabulate the facts because ages of parents are not stated in our birth registers. There are a great many things about which we can tell you only if we get a reformed Registration Act.

Q. But is not this one of the arguments for a reformed Registration Act?—*A.* There are any amount of arguments for that.

Q. The Commission could help in that respect, surely?—*A.* I should be very glad if it would. If we only had the age of the mother recorded in the birth registers it would be of great use.

Monsignor Brown. And how little trouble that would be.—*A.* Yes.

Dr. Saleeby. Might I ask you as a witness before this Commission whether in your judgment the Commission ought to press for a reformed Registration Act?—*A.* Yes, I think it is a matter which is quite urgent; we are pressing in that direction ourselves; but we should naturally welcome any pressure from any other source.

Monsignor Brown. Does it involve much expense?—*A.* It involves legislation, and the difficulty is for the Government to find time to deal with it.

The Witness withdrew.

Meeting.—February 3, 1915.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness re-examined.—Dr. T. H. C. Stevenson.

The Witness. There is just one point on which I wish to amplify my former evidence, because a fact that came to light subsequently modified the bearing of some of those

that had been put before you. I have brought diagrams; those that were shown before and one or two additional ones. And I might, first of all, remind the Commission of the facts already in its possession on which it is now possible to throw new light. They concern the relation of child mortality to the age of the mother at marriage. I have a diagram here that relates to marriages of varying durations, up to 2 years, to 5 years, to 10 years, and so on up to 60 years; and of course the child mortality increases with the duration of the marriage naturally. But in all these cases the mortality is comparatively high with the young mother —the mother who marries young.

THE CHAIRMAN. Does that mean before 20?—*A.* Yes, that is up to 20, roughly. *This* is 20–25, 25–30, 35–40, and to 45; child mortality decreases until we come to mothers aged 25 to 30, and then it increases again. There was a very simple explanation for the fact that mortality decreases as the mother gets somewhat older at marriage up till 25 to 30, and that is that the mortality of the children varies tremendously with the number born in the family. I have two diagrams here showing the relation of child mortality to number in family taken from the recent census returns. *Here* we have mortality. *This* is the base line, no mortality, then 100, 200, up the 500 deaths per 1000 births, the marriages being all of duration 15–20 years; and you see that the mortality of the single-child families is about 10 per cent., and it increases until we come to a mortality for fifteen or more children per family of 50 per cent. They are rather extraordinary curves in this way, that the relationship is not a simple one; there is a characteristic form of curve which is repeated over and over again. I have five curves here. They are for different groups of families, grouped by the age of the husband and wife at marriage, and you see that in all cases the rate of child mortality rises comparatively rapidly at first, and then from about the four- to the seven-child families or so there is a distinct falling off in the extent to which mortality increases with increasing size of family, followed by a renewed and progressive acceleration of increase for the larger families. There seems to be some natural law in the matter, because the thing comes out in every case investigated. It is one of those facts one comes across and has to record without being in a position to suggest any explanation. Of course the bearing of the general relationship of increase in mortality with increase in size of family upon the curves previously submitted to you is obvious. It is the mothers who

marry young who have the large families—of course it must be; and the reason why the children of the young mother survive less than those of a woman somewhat older at marriage is mainly because it is the young mother who has the large family, and it is the large family that has the heavy mortality. The comparison is made in the new diagrams (those showing child mortality in relation to size of family) for mothers of varying age at marriage, and it appears from them that when the number of children in the family is taken into account the very young mother is at a slight disadvantage; but the mother of 20–25 is at no disadvantage whatever as compared with the mother at 25–30 at marriage; so that this fact for the most part explains the downward slope of the first half of the earlier diagram (*i. e.* decrease of child mortality with increase of mother's age at marriage from 15–20 to 25–30); it cannot explain the upward slope of the second half, in fact it emphasizes it, because the older brides make those mothers who have small families, so that, other things being equal, their child mortality ought to be low, whereas, in fact, it is high. So that this diagram merely shows that the upward curve in the second part of this diagram understates the facts, and that children born to mothers who marry late in life have a considerably worse chance of surviving than those born to younger women.

Q. If you took a large family of fifteen spread over twenty or twenty-five years, would you expect the children first born would have a less expectation of life than the third born, and after the tenth less?—*A.* We have no means of investigating that because we have not got in our data the distinction between the order of birth of the children, or the ages at which they die. All we know is that a family has consisted of say eight children, and three of them are dead. We do not know whether these are the first, last, or middle ones, or who.

Dr. Saleeby. Your figures show the mother of 20–25 at marriage as satisfactory?—*A.* Yes, this shows her in the most satisfactory light.

Q. More satisfactory than 25–30?—*A.* I think so.

Monsignor Brown. I thought it was the mother at 29, somewhere about 29, who showed up best?—*A.* That was before this fact emerged. It shows that in comparing you have to take into account not only the child mortality but the number of children in family, and for an equal number of children in family the mortality in the case of the younger mother (20–25 at marriage) is certainly

not above that in the case of the older mother (25–30 at marriage).

Dr. Saleeby. The 20–25 mother?—*A.* Certainly not higher than the 25–30 in the cases of marriage of 15–20 years' duration.

Q. Then 20 to 30 is all optimum?—*A.* Yes, apparently—that is, the proper time at which to marry. One does not know. I have no figures showing the mortality of children born to mothers of given ages, you understand. I think an interesting question arises in connection with this diagram, and that is whether the children of these families have a large mortality because the families are large, or whether the families are large because of the large mortality experience of those parents. I should think that both effects are taking place. That is to say, referring to the latter, that people have in view some number of surviving children. If their children do not survive they go on having more children until they get the number they wish to have. I think it is quite conceivable—even without invoking the volition of the parents at all—it is conceivable that owing to the cutting short of the period of lactation and so forth, the heavier mortality may tend to bring about a higher birth-rate.

Mrs. Scharlieb. And also a diminished standard of comfort if they have a large number of children?—*A.* That is the other way round. I am saying it may not only be, what no doubt is the case, that the large family leads to a high mortality, but also that the high mortality may in itself lead to a large family.

Monsignor Brown. So that if they lose the fourth or fifth child they go on filling up, as it were?—*A.* I think that is conceivable.

Dr. Saleeby. Your figures are very hard on the woman who marries late in life. Could they be partly explained by the fact that those are the women who have been rejected at earlier ages—they are the inferior mothers?—*A.* That possibility ought to be considered.

Monsignor Brown. I think you get into a big fallacy there if you take the educated women; my experience is that women who are in every way destined to be good mothers are earning money and do not want to marry early?—*A.* You must remember that women of that class are entirely swamped in national figures referring to all classes.

Q. Domestic servants, for example, marry late?—*A.* I do not know. There is one other point I want to bring to

your notice as I am here. I showed when I was here before that the fertility of members of different occupations varied greatly according to the duration of the marriage; that is to say, that, for instance, the professional occupations are much more infertile relatively to the community at large after the marriage has continued a considerable number of years than they are in the early years of marriage; and there are diagrams here showing that. Then as a corollary of that, I thought it would be worth while examining the effect of the age of the wife at marriage upon her comparative fertility. An obvious explanation of the first fact is that with the classes which on this evidence presumably restrict their fertility most that restriction comes most into play after the desired number of children has been reached; and if that were so it seemed that it should also come most into play without reference to duration of marriage when the wife married young rather than when she married later on, because when she married young there was plenty of time to have all the children desired even if fertility were postponed. If she married over thirty the time was restricted, and the probability seemed likely that fertility would be comparatively higher for these classes in the case of these elderly marriages. It proved to be so absolutely. Where the bride is young at marriage there is a tremendous difference between the occupations. This difference gradually decreases as the bride gets older at marriage, until we come to the marriages of elderly brides, when it is very much less than it is with the marriages of younger brides. If these facts do not prove that the fall in the birth-rate is due to volition, I think they are in a high degree consistent with that theory.

THE CHAIRMAN. What are these very short lines? (indicating).—*A.* Those are the doctors, I regret to say. In order they are: doctors, teachers, Church of England clergymen, other clergymen, cotton-weavers, cotton-spinners, carpenters, farmers, boiler-makers, agricultural labourers and coal-miners. Those are the selected occupations. The textile workers are almost professional in their infertility; that is the interesting point that comes out about them. Of course, one expected that.

MR. HOBSON. Is that equally so in the cotton and the woollen trades?—*A.* I have not done it for the woollen, but judging by the birth-rates I think it is more so in the woollen than in the cotton; the fall certainly began earlier in Yorkshire than in Lancashire. There we have to go by the geographical evidence. It is curious that there should be

quite a considerable difference between cotton-weavers and cotton-spinners, but cotton-spinners for some reason are decidedly more fertile in all these groups than the weavers.

MONSIGNOR BROWN. I think half-time labour is mainly in the spinning mills.—*A.* So that there is more inducement to have children?

Q. Children are an asset.—*A.* Yes.

The Witness withdrew.

Meeting.—December 18, 1914.

Chairman.—The Very Rev. DEAN INGE, D.D.

Witness examined.—The Rev. W. F. LOFTHOUSE, M.A., Hon. Gen. Secretary of the Wesleyan Methodist Union for Social Service.

The following statement was handed in by the Witness—

1. The discussion of the religious aspect of the question naturally starts from the New Testament position. This is partly original, partly influenced by (*a*) the Old Testament, (*b*) by existing social conditions in the empire in the first century B.C.

The Old Testament recognizes the economic, civic and military advantages of large families, apparently both in earlier and later times, champions a uniformly high ideal of family life, and roundly condemns all prostitution and adultery. Though woman was regarded as something akin to a chattel in the earlier Hebrew law, the social position assigned to a woman is, at least relatively, high. The production of children is not definitely regarded as a positive religious duty.

In the Roman (heathen) world, in which slavery was an accepted and universal institution, sexual vice was common, in spite of conspicuous exceptions, and must have seemed peculiarly prominent to a Jew.

The causes for a falling birth-rate were already beginning to operate in parts of the empire; but the New Testament writers naturally took no interest in any side of this question.

To Christ, marriage is the normal state for man and

woman; and the most intimate union and abiding fidelity are demanded; and, as may be gathered from His general teaching, the interests of the child are of the highest importance.

Paul (like Christ, unmarried) was in this thought about marriage a Jew; but he recognized the existence of special callings for which celibacy would be necessary, as well as advantageous in certain circumstances; but that celibacy (or continence) was not possible for all. He, too, laid the greatest stress on mutual marital fidelity.

The specific ideal of chivalry finds expression in Peter's words about woman as the "weaker vessel."

It may here be noted that the Church has for the most part in her official theology missed the New Testament standpoint through a mistaken asceticism, regarding the sexual act as itself more or less sinful. To Catholic theology the sexual impulse is the result of the Fall; hence marriage must normally be for the production of children only. To Luther, the original purpose of marriage was the production of children, needed alike by State and Church; after the Fall arose sexual desire, against the sinfulness of which marriage is the appointed protection.

For Religion, the first question is, therefore, is the sexual act end or only means?

In answer, pleasure is never, in the New Testament, regarded as an end in itself. The one end for the Christian is the glory of God. But in so far as pleasure benefits him who enjoys it, and inspires his gratitude to its source, it is hallowed. This surely may be said to hold good of sexual pleasure. The New Testament does not speak as if the end of marriage were simply the production of children.

With regard to the act in question, however, while there is no more explicit guidance than what is summarized above, the following points may be deduced from the New Testament—

1. The act is to be intra-marital only.

2. Its performance at any time should be the will of the woman as well as of the man.

3. There must be no interference with the life (pre-natal or post-natal) of the child, or the functions (present or future) of the mother.

4. No considerations of pleasure can be allowed to interfere with this principle.

5. The act is never to be thought of apart from the needs of the persons involved; parents, family, children or State.

It is at this point that the conflict arises for individuals.

The act is desired and, as it would appear, needed; and a desire so universal and, with most people for a long period, so continuous, cannot well be looked upon as wrong.

But its physiological results, in the birth of children, are often not wished for, for economic, physiological or personal (and selfish) reasons.

How is this conflict to be solved?

(*A*) For those who accept the Christian faith and teaching, the following principles may be laid down—

Where, for any reason, a large family is not thought to be consistent with the end of a particular marriage, either complete continence will be practised; or where this is not felt to be desirable or necessary, restriction, with equal cheerfulness. To what extent? Those periods when conception is physiologically more probable will naturally be avoided; and in addition, a Christian will be justified, in this as in other matters, in relying on divine guidance, and in trusting to divine providence for whatever may result. This will diminish the weight of the first two (economic and physiological) of the three reasons mentioned above; the third (merely personal or selfish) will not influence conduct in the case under consideration.

Preventive checks, therefore, even if sanitary and safe, will not be considered, for reliance on them will interfere with the Christian's filial trust in God, and their use would prevent what God may intend to come about, as well as what the State clearly needs, viz. the production of children of good parents who will grow up in a good home.

(*B*) For those who do not accept the Christian position, *i. e.* the possibility of divine guidance or divine providence, or recognize the claims of the needs of society over their conduct, the interests of morals and the well-being of society would seem to demand the following statement—

All three reasons mentioned above lead to the resort to preventive checks. Nor are all the reasons to be in themselves condemned. The parents may see no chance of rearing a large family in tolerable conditions; or, because of special circumstances, any family at all. Parturition may be not only painful, but dangerous, to the mother. Or both considerations may operate.

Is, then, the use of checks to be allowed?

Three arguments, however, are urged against it—

1. It is unnatural (even if quite safe), for it is an artificial interference with a normal process.

2. It is connected with what is at present an undoubted evil, a diminution in the birth-rate.

3. Once the consequences of the act are "trammelled up," all sorts of moral dangers intervene.

It is a question, however, whether any of these statements, even if regarded as proved, would have weight against a strong impulse, unless reinforced by religious or social enthusiasm. Unless continence can be attained, it must be remembered that the alternative of "fornication and uncleanness"—which is wider than "professional prostitution"—is the subject of the most explicit condemnation in the New Testament.

But the Church cannot in any case be satisfied with a mere affirmation that the use of checks is wrong. She must say either more or less. It may be questioned whether she has any right to make the affirmation categorically.

Instead, the duty of the Church is to attack the causes which lead to their use.

First, as regards the personal reasons which have more influence over the well-to-do. A public opinion must be created in favour of a moderate rather than a small family; there must be teaching on the physiology of motherhood, as the proper function of woman and normally quite safe. Attention must be called to the family as a part of the State; the social as well as the physiological side of marriage must be upheld; and attention must be "drained off" from mere amusement as an ideal of life.

Second, where the causes are predominantly economic, *i. e.* where a large family is likely to entail going short in the necessities as well as the luxuries and comforts of life. Here the poorer classes are chiefly concerned.

The comparatively recent rise in the standard of life means that people will not tolerate what once was acquiesced in. They are convinced that four children have a better chance than eight, and two than four. They cannot be blamed for this. It is therefore necessary to remove the fear of the consequences of having a moderate family.

This may be done by some form of endowment of parenthood, as, tentatively, in the present income-tax arrangements, and by social improvements in general, especially housing and educational facilities.

When the negative fear of consequences is removed, the way will be open for the positive influence of medical teaching and social and moral exhortation mentioned above.

But parenthood must not, in any case, be penalized. Let the State recognize that the privilege of having children presented to it implies duties to both parents and children themselves. At the same time, the duties of children to

parents, especially aged parents, should as far as possible be recognized by the State.

As regards the very poor, who may be thought to be multiplying too fast at present, it may be remembered that this class can find little relaxation and amusement save in drink and sexual pleasure and the cheap excitements that minister to both.

As its standard of life is raised by the enforcement of a national minimum, this danger will diminish. They will approximate to the class immediately above them.

The following detached observation, bearing on the religious aspect of the question, may be made by way of appendix—

Since we may assume that the majority of children at birth are viable (apart from the action of racial poisons), it must be remembered that the New Testament, laying no emphasis on quantity, undoubtedly emphasizes quality with regard to the children of the community, so far as it is attainable by physical and moral nurture. This would suggest that the solution for the question of the birth-rate is not to be found in specific measures either to secure a high birth-rate or to combat a low one, but by wise and unremitting care for the children, both by the parents (as encouraged by the State) and by the State itself. The recognition of duty in a community, like its opposite, is contagious.

Mr. Marchant. I understand Professor Lofthouse would like to supplement this précis by some observations before you ask questions of him.—*A.* I ought perhaps to add that I do not claim to come here as in any sense a representative of the religious body to which I belong. What I have desired to do was simply to make some suggestions, or to bring forth some contentions which, as it seemed to me personally on my own responsibility, would flow from the facts that have most of all been in my mind.

The Chairman. Has the question ever been discussed at any of the meetings of the Free Church Council, or anything like that?—*A.* I am not aware that it has.

Principal Garvie. May I say there is a Committee, of which I am Chairman, connected with the Free Church Council, which is preparing a Report upon "The Family and the Home," and we have necessarily had to consider that question in some measure, but we are avoiding the minute investigations which this Commission is attempting.

MONSIGNOR BROWN. You say, "The causes for a falling birth-rate were already beginning to operate in parts of the empire." Is that a deduction, or is it based upon any knowledge?

THE CHAIRMAN. I think I can answer that question. According to Seeck, who is an authority on the subject, he considers the birth-rate was falling rapidly, except among the Semitic stocks in the empire, and, of course, among the Germans in the north.

MONSIGNOR BROWN. Then there is a positive statement to this effect: "To Catholic theology the sexual impulse is the result of the Fall; hence marriage must be for the production of children only." Can you tell me where you get the authority for that statement, as representing the Catholic theological teaching?—*A.* That, I think, is found fully stated in Aquinas.

Q. You say that "the Church cannot be satisfied with a mere affirmation that the use of checks is wrong. It may be questioned whether she has any right to make the affirmation." But suppose the Church is asked for a definite opinion. Has she not a right to make an affirmation?—*A.* She has the right to make the affirmation, but she can hardly be satisfied with that.

Q. If people come and ask from perplexity of conscience, "What is taught?" this seems to say the Church ought to hold up her hands and say, "I am very sorry, but I have not a thing to say."—*A.* Simply because the case is so doubtful.

Q. Do you say it is perfectly doubtful whether to use a condom or not?—*A.* I think it is extremely doubtful whether you can say in all cases that it is wrong.

Q. Or other mechanical means, like pessaries and so on?—*A.* That, I think, the précis condemns.

Q. Only on medical grounds. You select the condom as medically safe and, for the purpose for which it is used, efficient. But, then, I am asking on the main question, is it the duty of the Church, if consulted on the practice of A, B or C, to give a decision in her opinion as to whether it is right or wrong?—*A.* No.

Q. A good deal of the evidence we have had seems to point to the voluntary restrictions being practised by people who are very anxious about the future of their children—how to educate and start them in the world—rather than by the less-paid working-man who lets his children more or less take their chance?—*A.* Yes. Of course, it is very difficult really to draw a definite line. I

simply distinguish between the well-to-do and the poorer classes, but here, of course, the exact scope of either class—the well-to-do and the poorer—really makes no difference to the argument.

PRINCIPAL GARVIE. In regard to Protestants, would you be prepared to say that the causes which lead to a falling birth-rate arise because Protestantism has not recently given definite teaching upon that subject, and people have been left to follow their own judgment in the matter, whereas the reverse condition among Catholics is because Catholicism has rather maintained a more complete control over the action of the people? Would you agree that that is the reason?—*A.* Yes, I should certainly think that is one reason.

DR. NEWSHOLME. Has there been any authoritative teaching in Protestant communities by Protestant Churches among religious communities?—*A.* Of late years, I should say certainly not.

Q. Has there ever been?—*A.* Well, the general teaching of the Lutheran Church, for instance, was certainly, at least by implication, that no restriction should be practised in any way, but I think it would be admitted everywhere that Lutheranism and Calvinism, and Anglicanism in the same way, have been very reticent on the subject.

MONSIGNOR BROWN. Reticent in the sense of public utterances?—*A.* Yes.

Q. But in the matter of private or personal teachings; suppose an individual went to consult a clergyman, do you think he would say, "I have nothing to say on the matter; I hold no views on the matter," and so on?—*A.* There it is very difficult to speak with confidence; my own impression is that very little guidance would be given.

DR. STEVENSON. Quite so!—*A.* It is a matter of reticence, rather than a matter of the opinion held.

PRINCIPAL GARVIE. I do not think any of the Protestant Churches could be said authoritatively to hold any opinion in favour of restriction. Would you not agree with that?—*A.* Yes.

Q. I do not think any of the Protestant Churches would authoritatively give an opinion in favour of artificial restriction?—*A.* No.

DR. GREENWOOD. Is it your individual opinion that it is in accordance with the teachings of the Church to restrict intercourse to certain periods when it is generally believed to be unlikely to be fruitful? Where is the essential difference between adopting some means to prevent conception

occurring or restricting the intercourse to a period in which it is unlikely to occur?—*A.* It seems to me there is a very large difference between them. In the one case, of course, you do adopt artificial means; in the other case you simply say, "Well, we will contain ourselves." Unless you are to say that whenever the impulse takes possession it should be obeyed, it seems to me you must withdraw in some direction.

Dr. Saleeby. Will you again tell us exactly where is the moral distinction?—*A.* Well, perhaps I might put it in this way. I am assuming here that we are dealing with Christian people; that is to say, people who are convinced that both their impulses and their actions are under the control of God. Now, it is obvious that the act is more likely to be followed by certain results at one time than at another. These people do not think, you see, that the results will be altogether good as far as they can see. They think, that is to say, that if the result takes place, there will be various consequences which, as far as they can see, they do not desire, and as far as they can see are not according to the will of God. On the other hand, here is this impulse, an impulse in itself which they regard as a good thing. The pleasure which is connected with it they also regard as the gift of God; and they also know that, as regards results, the results are in God's hands and not in theirs. The results go according to His own disposition. These results are less likely at some times than other times. Therefore, it will naturally follow that they will choose the time when, as far as they can see, the results that they believe to be not in accordance with the will of God will not come about; but they know that the matter is uncertain—that His will is supreme; and therefore, while indulging that impulse, they will naturally say, "The matter is in God's hands, and we may go so far to prevent conception; and if He desires that children will follow, well, God's will be done, and He will provide for them."

Q. I suggest that the bringing in of the will of God complicates the matter very much?—*A.* I know it does, and I have simply considered it heretofore because, although the consideration complicates the matter, yet for those who do accept this position it is a complication they cannot rule out.

Monsignor Brown. Take a case. Here is a man who particularly reads physiological information which tells him that at the given time the chances are nineteen or twenty to one against a child. He says, "Very well, now; there I

am; we shall restrict ourselves absolutely to that period." Why? "Because we do not want to have any more children, but we want to have sexual intercourse." How does that agree with what your interpretation: "Pleasure is never, in the New Testament, regarded as an end in itself"? Because this man is obviously doing it for the gratification, or relief if you like, of the sexual act, once he has got on the physiological plane of safety where it is not likely to have any conceptional results? Is it not getting down to that?—*A.* I should say not, because it is not my view, if I might put it so, that the sexual act between husband and wife is simply one for pleasure. I mean, absolute continence may have other effects on the married life and the intercourse between husband and wife besides simply pleasure. Might I add one word in answer to Dr. Greenwood? I do feel very strongly that there is a distinction between the use of mechanical means and continence. There seems to be a very large difference there.

Mr. Marchant. Would you say that under all circumstances the use of mechanical or artificial means is immoral?—*A.* I do not say that. It seems to me it is very difficult to assert it is immoral—I do not know on what ground we can say it is definitely immoral.

Q. You would not hold that under all circumstances, from your Christian position, moral restraint was the only justifiable means?—*A.* Well, there I should shrink from bringing myself into the position of father confessor. Unless I could see some real and definite conflict with some clear moral rule, I should find it very hard to say, "You must make no use of this particular means, which we assume to be perfectly safe and effective."

Q. That is to say, where moral restraint is not possible, you would allow mechanical means under certain circumstances?—*A.* Yes.

Monsignor Brown. On that reasoning, you would only rule out *coitus interruptus* on the ground that it might damage the woman or both parties?—*A.* That is the ground on which one would rule out any mechanical means.

Q. And that ground only?—*A.* Just so far as that goes.

Mr. Marchant. I was going to follow that point, and ask you why you condemn mechanical means, if not on moral grounds. Is it on the physical result to the wife?—*A.* As I tried to state, it appears to me—and here I speak as an outsider—that the vast majority of mechanical means are unsafe, dangerous, to the wife.

Q. Then you adjudge them from that point and not the

moral point?—*A.* Yes; when the moral point has to be considered, then there are the considerations that would specially come up with regard to my A class, and there are also those considerations to which I have briefly referred under other headings.

Dr. Greenwood. Is your position this, that the circumstances which will lead to a decision as to whether action is moral or immoral are so numerous, and so impossible to be communicated to a third person, that that third person—whether he is a religious teacher or not—has no right to take upon himself the responsibility to lay down a hard-and-fast rule?—*A.* I feel that very strongly. I shrink from taking up the position of a spiritual director in that way; I shrink from desiring other people to do it.

Q. Not on the ground that you shirk the responsibility, but the ground that the factors are so delicate and numerous that they will not come out *viva voce?*—*A.* Exactly! The circumstances in each case are so complicated.

Monsignor Brown. Is the deduction from that, that you must conform the direction to what they must do, not what they ought to do?—*A.* No. I was suggesting that, instead of attacking the practice directly, we must attack it indirectly.

Q. But not on religious grounds, I think you suggest?—*A.* I was putting it in this way. We must look, not so much at the act itself, as at the motives which lead to the use of such an act; that if at bottom selfishness is the reason why people wish to use restrictions, then we must attack selfishness; we must attack the moral characters of the individuals. If, on the other hand, it is predominantly an economic reason, we must attack those economic causes. If people are afraid, for instance, that if they have a large family they will not be able to house them decently in the cottage in which they live, then that is obviously a matter of housing conditions.

Principal Garvie. You would maintain that the Christian Church must lay emphasis on moral self-control, rather than any other means by which moral self-control would be evaded; that is the Christian idea?—*A.* Yes.

Q. To emphasize, and try to impress upon all those whom they can influence, that the thing to be aimed at is moral self-control?—*A.* Yes.

Mr. Marchant. Might I suggest that the Dean has the opinion of the Bishops, which, I think, may perhaps further help us?

The Chairman. This is a Memorandum proposed by a

Committee of Anglican Bishops, which has received the approval of the Diocesan Bishops of the Anglican Church. In order to save time, I will not read the first two pages, which only state facts with which we have all become familiar.

The Memorandum [1]

THE MISUSE OF MARRIAGE.

The following Memorandum, prepared by a Committee of Bishops, has received the approval of a large majority of the Diocesan Bishops.

Prefatory.

The following Memorandum deals with a subject which modern conditions of life and modern ways of thinking have brought into special prominence. Changes have been silently proceeding which touch some of the most sacred and intimate parts of life. Moral questions of a most delicate and difficult kind confront plain people in every class, perplexing consciences, and impairing singleness of heart.

The Bishops are very sensible of this. Respect for individual responsibility and freedom makes it not less but more necessary to do anything which can be rightly done to make clear the principles and issues which faithful and honest Christians have to consider and face.

The Clergy have a right to some guidance in the exercise of their own cure of souls, and may well look to authority to provide them with some suggestions which they can put before others.

It is to serve these purposes that these notes have been very carefully drawn up. They leave, obviously, very much unsaid; much, too, can only be dealt with in the individual case. They attempt only to give some outlines of guidance, and the wish of the Bishops is to speak in the first instance to Clergy and others who have a special responsibility in the matter.

Plainly the subject is of so sacred a character that it ought only to be thought of or discussed with the deepest reverence, and with the recollection of the presence of God, by whom mankind has been entrusted with the great gift of the procreation of the highest form of life.

[1] This Memorandum was printed for private circulation amongst the Clergy and workers of the Church of England who desired counsel as to the line they should take in these matters.

But the notes will, at the least, convey the strong conviction of the Bishops, that these matters can only be wholesomely dealt with if an earnest effort is made by all Christian people to apply to them Christian principles.

(*A*) The Present Facts and Tendencies.

The following summary statements, for which full warrant can be found, indicate the nature and gravity of the need. They confirm from the side of statistics and ascertained facts what is suggested by everyday experience of the change in English family life.

(i) The birth-rate of Great Britain, and especially of England and Wales, is declining. In 1881 it was, for England and Wales, 33·9 per 1000; in 1891 it was still 31·4; in 1901 it had fallen to 28·5; in 1911 it had dropped as low as 24·4. The effect upon population is somewhat disguised by the increase in longevity (as is shown in the fall of the death-rate from 18·9 in 1881 to 13·5 in 1910).

(ii) The number of marriages in each year is increasing.

(iii) The obvious inference from these two facts seems to be that the average fruitfulness of marriages in Great Britain is greatly decreasing, and this inference is borne out by a close study of the statistics.

(iv) That this decrease is very largely due to the deliberate restriction of the procreation of children in married life is attested by its concurrence with the sale of drugs and instruments for this purpose, and by communications which have been received from many different sources.

(v) This diminished birth-rate is the more serious because it is found most among the more educated and the robuster parts of the population, and least among the physically unfit.

(vi) In addition to the peril, thus disclosed, to the morality and welfare of our own country, very strong declarations are made by those best qualified to speak, to the effect that such restrictions tend to many forms of damage to the moral, mental, and bodily health of those who use it. This is confirmed by testimony from the colonies and from foreign countries.

(*B*) Considerations as to Conjugal Duty.

In view of this advancing evil, we wish to make the following suggestions—

(i) The first principle seems to be that the right and normal view of married life, intrinsically and apart from the pressure of conditions, such as we shall speak of in the next paragraph, is that the sexual instinct and the course of nature, bounded by such care and self-discipline as conscience prompts, should be recognized as of God's ordering, and the blessing of children, be they few or many, welcomed as from Him.

(ii) To speak of this as if it were mere self-indulgence, reckless of future consequences to parents and offspring, is entirely false, cruel, and superficial. On the contrary, it often means a brave and trustful confidence that the natural and temperate use of a state appointed by God, and entered into with His Blessing, can only work out for good; and is accompanied by a courageous readiness on the part of the father and mother to face the responsibilities and carry the burdens which the bearing and rearing of a family impose upon them. Experience continually confirms this confidence. Large families are admirable schools of vigorous, dutiful and unselfish character.

(iii) There have, however, always been cases in which prudence, or other forms of duty, call for exceptional conduct; and it is strongly and reasonably urged that modern conditions of life in a country like ours have greatly enlarged the number of such cases. The health or strength of the wife may be unequal to the bearing of more children; the conditions of the home may give no hope of their decent housing; or poverty may make it apparent that they could not be maintained and brought up. In some cases such considerations as these warrant an anxious desire that the number of the family should not be increased; and it is necessary to consider whether there is any right course to be adopted by those who may rightly feel this desire.

(iv) It seems in this connection important to insist upon the principle, essential to the Christian character

of marriage, that it is subject throughout to conditions of reasonable and conscientious self-restraint. Marriage does not mean the exchange of a state of self-control for one in which no control is needed. So to treat it, as it is to be feared many do, is not Christian, but grossly sensual; it is altogether lacking in due consideration for the wife; it is the unspoken cause of much which is now felt and said on the side of women about the relation of the sexes. All marriage, and especially prolific marriage, demands of the man that he should go for certain periods without intercourse; in cases of special fertility, a considerable proportion of married life may have to be lived in abstinence. In many a case of the wife's ill-health, such abstinence may be prolonged or even permanent. Christian chastity in married people means the power to bear all this without injury to the wife or sinful indulgence with others. Such chastity will, by some, be found exceedingly hard, but it is entirely consistent with health, and it is to such a case that Christians should apply to the full their reliance upon God's grace earnestly sought by faith through prayer and sacrament. It seems to most of us only a legitimate application of such self-restraint that in certain cases (which only the parties' own judgment and conscience can settle) intercourse should be restricted by consent to certain times at which it is less likely to lead to conception. This is only to use natural conditions; it is approved by good medical authority; it means self-denial and not self-indulgence. And we believe it to be quite legitimate, or at least not to be condemned.

(*C*) What we Condemn.

In direct contrast or opposition to the first principle (referred to above, (*B*) (i)), it is now claimed by many that where for reasons already given there is desire or need to limit the family (or even, to avoid parenthood) recourse is allowable to drugs or appliances which profess to give security against any results from intercourse, and, therefore, allow indulgence without fear or restraint.

It is at this point that we desire to give our clear warning and to offer our unhesitating judgment.

We believe that (broadly speaking) such use is at once dangerous, demoralizing, and sinful.

(i) It is condemned, we believe, as unnatural, by healthy instinct in men and women. A society in which it is practised will lose delicacy of feeling, and the refinement which is not the exclusive property of any particular class, but comes of keeping the natural instincts of modesty and reserve untarnished.

(ii) It errs against the first principles of true purity by isolating the physical side of sexual union, and making it an object in itself apart from its proper purposes.

(iii) It puts in a false light the distinction between married and unmarried in point of self-control; inasmuch as it implies that there is no self-control to be expected from the former.

(iv) The fact that medical journals of good standing refuse to accept advertisements of such drugs or appliances is very significant.

(v) In the course of our inquiry, evidence has come before us that, besides the practices which we have been considering which are intended to prevent conception taking place, there is a widespread use by women of drugs taken, after conception, to destroy the embryo in the womb. About this no language can be too clear or strong. Whether it is effectual in destroying the life of the embryo or, as often happens, only weakens and impairs the vitality of the infant when born, it is a grievously sinful attempt to destroy the life which God has given, from which the conscience of every woman ought to turn away in horror.

(*D*) What we Counsel.

We believe that the counsel to be given to Christian husbands should be to have no dealings with these methods; to behave with full consideration to their wives as to the due intervals between births; to make, if necessity urges, such choice of times as we have referred to above; but then, if it should be God's will shown through nature that their family should be large, to recognize this as part of their appointed duty, and to accept the conditions of frugality, restraint of pleasures, and the like, which it imposes.

There remains the question of the duty of wives, and of the advice to be given them when they desire it. Upon this, we think it sufficient to say that they should do all in their power to make and keep their marriage wholesome, natural and chaste; and to reinforce by their own even stronger and finer instinct the resistance to the misuse of marriage; and that they should not shrink from the heavy burthens which marriage may entail upon them. They should realize that the practices which we have condemned lead to the loss of mutual self-respect, and are often perilous to the devoted affection of husband and wife; that the incomplete and arrested fulfilment of the sexual act is attended with risk to the nervous stability, and that a childless married life, when it is brought about by these methods, often proves, in the long run, desolate and disappointing.

In the case, however, where the man, in spite of the wife's repugnance and persuasion, insists on using improper means, we do not think that the woman's conscience should be burdened by the sense of sin, or of unfitness for the Lord's Table, so long as she keeps herself honestly clear of any willing compliance in the matter.

But all this advice must be accompanied by a strong invitation to Christian men to be active in opposition to those social and economical influences and conditions which make the rearing of families hard and the true course difficult to follow.

Among the harmful conditions are—

(i) Such remuneration of labour as does not allow of rearing a family decently.

(ii) Housing conditions, or conditions attached to employment, which are prohibitive of families, or of more than one or two children. These we believe to be morally wrong and nationally disastrous.

(iii) But we desire Christian people to recognize that the love of pleasure and comfort, and a standard of expenditure on dress, furniture, holidays, higher than the family means reasonably allow, are quite equally potent cause of the difficulties with which we are here concerned.

We write these counsels as though to Christian man and wife. Into cases where husband and wife differ, one acknowledging these principles and the other repudiating them, and into questions of conscience thus arising, we cannot

here follow. Personal counsel, sometimes that of a doctor who maintains the higher standards in the matter, must give any needed help to consciences in dealing with the issues.

In conclusion, we are very far from thinking that we have removed all difficulties. On the contrary, we believe that the difficulties (though often greatly exaggerated) are real and urgent, and that they need all that Christian conscience, resolution, and faith can do to meet and solve them. But we do believe that we have suggested the right lines along which, with God's help, a solution may be sought in their own individual cases by Christian men and women, ready to bear the cross, and determined to keep themselves in purity and temperance for His Service.

(*January* 1914.)

APPENDIX.

Resolutions of the Lambeth Conference of Bishops, 1908.

"The Conference regards with alarm the growing practice of the artificial restriction of the family, and earnestly calls upon all Christian people to discountenance the use of all artificial means of restriction as demoralizing to character and hostile to national welfare.

"The Conference affirms that deliberate tampering with nascent life is repugnant to Christian morality.

"The Conference expresses most cordial appreciation of the services rendered by those medical men who have borne courageous testimony against the injurious practices spoken of, and appeals with confidence to them and to their medical colleagues to co-operate in creating and maintaining a wholesome public opinion on behalf of the reverent use of the married state."

The Witness. Might I just add in one word how very interested I have been in that, and how in nearly every word I felt my own agreement going with it.

The Witness withdrew.

Meeting.—January 20, 1915.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—The Right Rev. Monsignor W. F. Brown, Vicar-General of the Diocese of Southwark and Protonotary Apostolic.

The Witness submitted the following statement to the Commission—

Précis

respecting points of the Teaching and the Law of the Roman Catholic Church concerning Marriage.

In submitting this statement I shall confine myself to setting out the doctrine and the law of the Roman Catholic Church concerning marriage. It is no part of my purpose to meet objections thereto, or even to submit proofs. I begin by quoting an extract from the Exhortation before Matrimony contained in the order of administering the Sacraments in use in the Roman Catholic Churches in England. The language is somewhat archaic, showing that the period of its composition must be remote. I am sorry, however, not to be able to give even an approximate date of its authorship.

"Matrimony is a holy state, originally instituted by Almighty God, between our first parents, in the earthly paradise (Gen. ii.), ratified and confirmed by the Son of God in the New Testament (Matt. xix. 4, 5, 6), honoured by His first miracle (John ii.), and raised by Him to the dignity of a Sacrament, as a most holy sign, and mysterious representation of the indissoluble union of Christ and His Church: to which He has been pleased to annex in favour of the worthy receivers a sanctifying grace, in order to enable them to love one another according to God: to restrain concupiscence: to bear with each other's weaknesses: mutually to help each other: to walk as it were hand-in-hand on the way to heaven: and to bring up their children, if they should be blessed with any, in the fear and love of God.

"Seeing, therefore, that this state is so very holy, and instituted for such great and holy ends, and, moreover, that it has so great a grace annexed to it (when the Sacra-

ment of Matrimony is worthily received), as to put the married couple into the way of being happy both in this world and in the next: we earnestly exhort you to enter upon this holy state, and to receive this great Sacrament, with such dispositions as may effectually secure to your souls so heavenly a grace. Your first care, therefore, should be to come to this Sacrament, with a conscience purified by repentance from all wilful sin: lest otherwise you incur the guilt of a sacrilegious profanation of this divine institution: and, instead of a blessing, receive here your condemnation, with evident danger of entailing upon yourselves a long train of miseries in this life, and eternal miseries in the next. Your intention also ought to be pure, that is, you ought to embrace this holy state with a view to promote the glory of God and the salvation of your souls, and to answer the holy ends for which God ordained it: lest, if you should in such manner receive Matrimony as to shut out God from yourselves and from your mind, you should, as the Scripture says, fall under the power of the devil (Tobias vi. 17)."

The end or reason for which a man and a woman ought to contract marriage is threefold—

(*a*) The procreation and bringing up of children.
"Increase and multiply" (Gen. i. 28).
(*b*) Mutual assistance in life.
"It is not good for man to be alone, let us make him a help like unto himself" (Gen. ii. 18).
(*c*) Restraint of concupiscence.
"If they do not contain themselves let them marry. It is better to marry than to be burnt" (1 Cor. vii. 9).

The principal or primary end of marriage is the procreation of children and afterwards their bringing up. The secondary end is mutual assistance and companionship, and also a remedy against concupiscence. Marriage may be lawfully contracted, even for the secondary ends alone, *e. g.* between persons of advanced age.

Marriage can only be validly contracted by persons who are mutually capable of complete sexual intercourse; should it be discovered after the celebration of marriage that complete sexual intercourse cannot take place between the contracting parties on account of the absolute or relative impotence of one of them, the marriage is null and void.

Marriage validly contracted and consummated is indis-

soluble and cannot be dissolved by any earthly power. "What therefore God hath joined together let no man put asunder" (Matt. xix. 6).

No human authority has any right absolutely to prohibit any individual against his antecedent will from contracting marriage, as such prohibition would be contrary to the Natural Law, *e. g.* the State cannot lawfully forbid the marriage of the poor or the physically defective.

There is no obligation arising from Divine precept on any individual to contract marriage, but it may happen indirectly that there is a duty to do so, *e. g.* to avoid sins of impurity if chastity cannot be practised, to repair injury done by seduction.

Although married persons may be advised to preserve continence during certain seasons, such as Advent and Lent, and during the celebration of certain Ecclesiastical Festivals, there is no precept forbidding the use of marriage at such times, nor immediately before receiving Holy Communion.

The right to the use of marriage is forfeited by either party committing adultery. In such cases the innocent party can refuse intercourse, but may pardon or condone the offence.

Certain reasons excuse one party from the obligation of rendering the rights of marriage. In practice such reasons are reduced to grave injury or serious discomfort likely to arise from intercourse.

As falling under the above heads may be included drunkenness, especially on the part of the husband when demanding the rights of marriage, the risk of contracting contagious or infectious disease, very grave injury likely in the opinion of medical advisers to arise from childbirth.

The grave sin of Onanism is absolutely forbidden.

Strictly so-called it consists in *coitus interruptus;* in a wider sense it includes sexual intercourse in the natural manner followed by various anti-conceptional precautions, or sexual intercourse together with the use of various appliances of an anti-conceptional character on the part of either the husband or the wife.

N.B.—It should be noted that some medical authorities use the term Onanism to designate what theologians call Masturbation. Cf. Gemelli.

Various authorities emphasize the injury to the woman arising from the use particularly of the mensinga or check pessary, also the increase in fornication and abortion, not

to mention the decline in the birth-rate in districts where these neo-Malthusian practices are general. Among them may be mentioned Eschbach, Surbled, Desplats, Pinkhof, Kouwers, Nyström and Dr. Damen.

The question naturally arises: What is lawful for a wife whose husband persists in Onanism?

It is certain that she is under no obligation to render the rights of marriage, whether the practice be *coitus interruptus* or the use of appliances.

She may not acquiesce in intercourse if the husband uses an appliance.

She may for a grave reason render the rights of marriage in the case of *coitus interruptus*, and even for a still graver reason seek intercourse with her husband, though he persists in the practice.

Among the reasons which justify a woman in acting as described above are fear of serious bodily injury, or great cruelty, fear that her husband may bring a concubine into the home, or cohabit with one elsewhere, or have recourse to prostitutes.

Also fear that he may seek a divorce from the civil authority, or separate from her, or cause great scandal, or assail religion, or make violent scenes before her children and servants. Even fear of constant quarrels and complaints will justify her in so acting.

In her own case, after having done her best to bring her husband to a right frame of mind, the wife may lawfully seek intercourse if otherwise she is in serious danger of falling into unchastity.

But it must be remembered that in such cases there is usually danger of self-deception on the part of the wife, who may unconsciously be at least passively in collusion with her husband in the matter.

She must be absolutely sincere in her reprobation of the Onanistic methods adopted by her husband, even though, to avoid other evils, she has to some extent to be an assenting party to them.

Otherwise, it is obvious that if husbands persist in Onanism, wives may come to regard themselves as freed from all responsibility for the use of illicit methods, and permanently acquiesce in their adoption.

Married couples should be told that Onanism either in the strict or wider sense is a grave sin, and opposed to the end of marriage as ordained by Almighty God.

They should be warned of the punishments to which they are liable in setting the Divine Law at defiance, and re-

minded that they are evading their duty as potential parents in using marriage while preventing conception from following.

They should be encouraged to take a higher and nobler view of the state of Christian marriage, to overcome their egoism and selfishness, and to practise moderation and self-restraint in the lawful use of marital rights.

They should be urged to strengthen their self-restraint by observing the penitential seasons of the Church, particularly Lent, by fasting or abstaining from flesh meat; and to seek the grace which the Sacraments confer on those who receive them worthily.

Where all other deterrents fail, married couples may be allowed to limit intercourse to the inter-menstrual period, sometimes called *tempus ageneseos.*

But this limited use of marriage is not to be put forward as a perfectly safe means of avoiding procreation. Brouardel and Eschbach are at variance as to the degree of certainty of this method.

The following arguments from reason may also be adduced—

Large families, even among the poor, do manage to get on in the world as well as small families, and are often of much assistance to their parents and one another.

Even where grave illness or death has been predicted by doctors as the almost certain result of another pregnancy, experience shows that such disastrous consequences do not by any means always follow.

Modern obstetrics can greatly mitigate the suffering and lessen the risks of child-birth even for delicate women.

Anti-conceptional methods are not by any means always certain, and should conception supervene, even in spite of their use, the wife may easily find herself suspected of infidelity.

Where the family is limited to one or two, should death remove the offspring, parents find themselves in the solitary position of those who are childless. It is not uncommon to find women after such bereavement the victims of profound melancholy. Many such cases of bereavement have arisen during the present war.

Normal women are in good health and spirits if child-bearing, whereas those who use anti-conceptional methods are often unwell and unhappy.

Physical injury may result not only from the skilled use of appliances and other methods, but also very easily from their defective application, *e. g.* the check pessary.

Immoderate use of food and drink are rightly condemned by common opinion as gluttony and drunkenness; in the same way excessive use of marriage is contrary to temperance and right reason.

Many persons even of strong passions cannot for various reasons marry at all, *e. g.* poverty, occupation. Others, though married, have to live continent for long periods in the course of their business or professional duties. No one, however, contends that such persons are therefore excused if they commit fornication or adultery. The cases of widowers and widows who cannot remarry are cases in point.

"Même dans le mariage, dit Card. Mercier, l'homme et la femme doivent modérer leurs désirs. Chaque mari doit avoir pour la complexion de sa femme les égards, les ménagements, que la prudence et la délicatesse du cœur commandent. Un jour peut venir où la sauvegarde de la santé de l'un des époux mettra entr'eux, pour longtemps peut-etre, une barriére; comment la respecteraient-ils alors, s'ils ignoraient les premiers efforts de la continence."

If husbands would treat their wives with kindness and consideration during the period of advanced pregnancy, many more women would cheerfully endure the disabilities of maternity.

For a pregnant wife to be left alone while her husband seeks recreation outside the home, and to be made to feel that child-bearing on her part is unwelcome to her husband, naturally leads, particularly in the case of very young women, to dislike of the social drawbacks of pregnancy and maternity.

In a word, the husband should take his share in the disabilities which child-bearing involves.

Abortion is a grave crime, and no woman may lawfully use any means, whether direct or indirect, to bring it about.

Persons who aid in administering or supply abortifacients are guilty of co-operating in the crime.

A pregnant woman is bound to abstain from any forms of exercise or amusement likely to cause miscarriage, *e. g.* riding on horseback, dancing, hill-climbing, and in general from anything she has reason to believe may injure the fœtus or induce premature delivery.

In conclusion, I would add that the Church should always support the State in any efforts to make the lot of parents with considerable families as easy as possible. At present they are severely penalized, particularly in the working-classes and lower middle classes, by the difficulty, in towns

at least, of finding house accommodation on account of their children. A step in the right direction has been taken in the Finance Act by granting some remission of income tax in proportion to the number of children in the family.

Such legislation might very well be extended, and much more might be done to help parents with large families by scholarships and other aids for the education of the children. I think the day may come when it will be necessary for the State to give bonuses to parents of more than two children, which is fast becoming, at least in the middle and upper classes in England, the usual number, as it has long been in France.

On the question of early marriages I would say that the influence of the Roman Catholic Church has been on the whole in their favour, but I think the age of marriage is gradually rising for our people as for the rest of the community, and I put this down largely to the increased cost of living, to the desire of people who have had the advantages of education to live in some degree of refinement and domestic comfort, and to the employment of educated women in various classes of clerical and other careers.

I would like to offer an explanation upon an earlier passage which may be a little obscure without an explanatory remark. It says: "No human authority has any right absolutely to prohibit any individual against his antecedent will from contracting marriage." The distinction is: suppose a person has entered into some state or obligation which makes marriage impossible that then the civil authority would be perfectly justified in enforcing celibacy, as he himself had chosen a state which carried with it an obligation not to marry. For instance, a man going into the army or entering certain branches of the Civil Service undertakes that he will not marry for ten years, or whatever it is. That is a point of antecedent will; he had chosen to take up a certain career carrying with it a disability. The proposition I lay down is that the State has no right to say that none of the red-haired men shall get married, or that men with blue eyes shall not get married.

THE CHAIRMAN. Or the feeble-minded?—*A.* Or the feeble-minded; I go so far as that.

Q. I have here some questions by Dr. Fremantle. The first is: "A. To what extent would the first 'end' of marriage (précis (*a*)), viz. 'To increase and multiply,' be held by the Roman Catholic Church to be affected by the

generally held obligation of parents to bring their children up in the social position, with the concomitant obligations and expenses, in which they and their friends and neighbours are placed? A civil servant or professional man, for instance, may be earning £700 a year net. He obviously cannot afford to have twenty children unless they are to be treated as guttersnipes; he obviously has a duty *not* to have them; and yet the rules laid down cannot secure him against having them in the case of a lusty couple with strong sexual passions marrying fairly early. This is especially the case in the Services, where the father has to serve much abroad; passions are lusty, expenses great, income small; and their influence on public fashion is fundamental"?—*A.* That question seems to ask for such people to be allowed to take means to prevent—what we should call unlawful means to prevent—procreation. I say "No" at once; but in saying "No" I do not mean to be understood as ignoring the hardship and the painfulness of the case, and the reasonable desire on the part of the parents to start their children well in life. But I think I suggest that should be met in another way. At the risk of being called a collectivist, I do maintain that as parents discharge a duty for the community in reproducing the community, the community has a positive obligation not only to the very poor parent, but also to the parent of limited means who has a large family. Failing any such aids or protection of that kind, I can only say that there is nothing for it but abstention.

Q. The second question is: "Grave danger from a possible pregnancy is held in the précis to excuse from an obligation to give marriage rights. Who is to decide this danger? Medical men alone can decide it; and yet it is shown, as is obvious, that doctors may err on the side of caution. How does the Roman Catholic Church in practice get over this difficulty? If it is the priest who decides, have they a recognized 'panel' of authoritative medical advisers? How would they consult them in specific cases?"—*A.* Of course, one has to take the evidence as given you. A person comes and says, "I have been warned by my medical adviser that there is very grave danger to me in another pregnancy; it may mean death." We do not for a minute, in pointing out that such warnings are not always fulfilled—we do not by any means throw complete doubt upon them or wish persons to disregard the advice of their medical man. Of course, if it were a doctor in first-class practice, say a doctor who is a skilled gynecologist, or a doctor with

a good reputation and practice, we should certainly regard his grave advice, his serious advice, as justifying the woman, as stated, in refusing.

Q. Now supposing that instead of the wife's health the doctor said what he would say in the case of a feeble-minded or epileptic person—would you consider that that justified the wife in refusing, or what would you say?—*A.* That is an exceedingly difficult question, because there is such an extraordinarily large element of doubt in that as to what the result of procreation may be. I should hesitate to say that we should accept that as a ground—you mean, Mr. Dean, for refusing the rights of marriage?

Q. Yes!—*A.* No. I think it may be perfectly well counselled to such persons that if the results of their intercourse had been deformed or defective children, that there should be a duty on them to abstain.

Q. The third question is hardly worth putting, because it is so easily answered from the Bible. Dr. Fremantle says: "Onanism in the wide sense here given to it is absolutely forbidden. Is there any biblical authority suggestive of such a prohibition?" Of course, Genesis xxxviii. is the answer. The question goes on to ask: "Or is it a rule deduced from the general commandment against murder; or is it a practical moral laid down and maintained by Catholic practice, and therefore unlikely to be accepted *as such* by Protestant communities?"—*A.* The answer is that it is always taken—the condemnation is taken—as not only extending to his refusal to obey the command, but also to the method he adopted to evade the fulfilment.

Q. The fourth question is: "The qualifications of the rule by which the wife may still render marriage rights under protest, would seem likely to become the rule rather than the exception in all but very strict couples. If so, does not the duty of 'sincere reprobation' laid on the wife, carried on over a course of years, tend to belittle the moral sense?"—*A.* I would like to refer to my actual paragraph. I suppose he refers to this: "In her own case, after having done her best to bring her husband to a right frame of mind, the wife may lawfully seek intercourse if otherwise she is in serious danger of falling into unchastity." I think it is obvious that no sane person would suggest that a wife should be constantly getting into a matter of grave quarrel or antagonism with her husband; if he once signifies his permanent will in the matter, she has to take that, as a reasonable woman, as the expression of his determination.

Q. Would you in practice refuse the sacrament or take any ecclesiastical measures against the husband in such cases?—*A.* Certainly. That is the method adopted to enforce their obligations on both parties, but there must be a complication when one person may be in the right frame of mind and the other is not.

Q. The next question is: "How is the difference between certain strict Roman Catholic communities, as in French Canada, and most European Roman Catholic countries as regards fertility-rates accounted for?"—*A.* Obviously, that in a great portion of the French-speaking part of Belgium, particularly about Liége and Tournai, there has been an open propaganda for years in Socialist and other newspapers, advocating all kinds of checks, and even going to the length of describing them all in the public Press. Certainly in Tournai and Liége you could read the whole thing; and also the fact that a great many people of that kind, although baptized in the Church and possibly being buried with the rites of the Church, in practice do not follow any religion at all.

Q. The last question is: "Who is to give the excellent advice advocated in the précis, especially on those who are not much influenced by ecclesiastical authority?"—*A.* I am only suggesting that the Churches should do it in some way or another, either privately before marriage, or, in the case of persons who come with difficulties, after marriage, or, as sometimes can be done, by instructions to adult men alone, not to a general congregation. It is obviously a matter which cannot be treated in the pulpit to a general congregation.

The Rev. Dr. Horton. I should like to put a question arising out of the last remark: whether the Catholic Church gives instruction on this subject in any way except privately and in the Confessional, whether any literature is circulated, or any sermons or addresses are ever given?—*A.* Particularly in the case of what we call mission sermons, and where sometimes you can succeed in getting the very young people excluded, there is very plain speaking on the subject of the prevention of conception. I do not mean plain speaking in the sense of describing the methods, but alluding to the fact that there are well-known methods and a denunciation of them. I have heard people object sometimes that it was too plain spoken.

Q. A mission is an exceptional thing?—*A.* Yes. You get a type of hearer then that you do not get on an ordinary Sunday, perhaps.

Q. Would any instruction be given systematically so that it would reach the whole Catholic community?—*A.* There is an obligation on the part of the clergy to satisfy themselves that couples coming to be married are sufficiently instructed in their duties and obligations, and to satisfy themselves on that. There are books which can be quite safely given.

Q. And is this marriage service exhortation that is quoted here universally adopted?—*A.* That is purely an adjunct to the marriage service; that is a preliminary exhortation or instruction.

Q. Is it occasionally left out?—*A.* Yes; and sometimes in substitution for it a composed address is given, but this may be used if the priest prefers it.

THE CHAIRMAN. Practically the same as we use?—*A.* Yes.

THE REV. DR. HORTON. The point I wanted to bring out was whether there was any method adopted by the Roman Catholic Church to further the objects that we have in view that might be made known and practised by other Churches in the country—whether there is a distinction in the practices. As far as we have heard, there is not very much distinction from what is going on all over?—*A.* You have always got the Confessional; you must remember that.

Q. But is it understood that in the Confessional this question is dealt with?—*A.* Certainly; because the average person would know that he was doing wrong and would mention it. That is where the matter very often first comes up, and there is a mass of legislation on the subject.

THE BISHOP OF BARKING. But I suppose some are married without going to Confession?—*A.* I am not speaking of ante-matrimonial only, but subsequent. Say after several years a young couple come with perhaps one child which was born five years ago. They may be prudently asked whether the obligations of the state are properly and regularly fulfilled. Then they may say, "Well, perhaps not altogether." That is where the "trip-up," if I may use the expression, comes in.

THE REV. DR. HORTON. Is there any means of knowing how that works, whether it really does check the sterilizing?—*A.* In answer to that, I would only point to the cases of where the Confessional influence of the Church is very strong that it does; particularly in parts of Ireland.

Q. In Austria, for example?—*A.* Parts of Austria. The two things vary, to my mind, in exactly the same pro-

portion. Where there is a strict practice of frequenting the Sacraments and therefore of going to Confession at least several times a year, then there is a check. Where there is not, it means that people do not go because they do not want to get tripped up.

Q. It would be very valuable to get those statistics. Are they available?—*A.* Dr. Stevenson is here.

Dr. Saleeby. There are many such statistics, I believe, Dr. Greenwood?

Dr. Greenwood. Yes. You need only compare the statistics of different parts of Ireland from the Irish Blue Books.

The Witness. Even parts of Belgium give admirable statistics for the basis of comparison in that way.

The Rev. Dr. Horton. Are the statistics drawn up on that basis, to find to what extent the Confessional affects this question?

Dr. Greenwood. Only that you can take the registration districts of Ireland, and one knows the proportion of strict Catholics in those registration districts of Ireland, and there is an enormous difference in the birth-rate. And, of course, the same comes out in the case of Germany, where you have practically a strictly Catholic community in Bavaria, and some parts of Prussia almost strictly Protestant. You notice the comparison of the birth-rates there.

The Witness. If I may refer to an author I have quoted, Pinkhof, he suggested valuable statistics from Belgium.

Dr. Saleeby. I should say that Dr. Greenwood would say it was well proved.

Dr. Greenwood. The only difference is in all these cases there is a racial difference, if you compare Bavaria with Prussia. I think Dr. Saleeby has gone into this—there are different races?

Dr. Saleeby. Yes, certainly; and to some extent in others.

Dr. Greenwood. I suppose that would be so in Ireland?

The Witness. Yes, that is so; but Belgium would give you an admirable basis of comparison, because Liége is a town where there was a very strong neo-Malthusian open propaganda, and that author I am speaking of refers also to another, a Flemish author. He quotes Dr. Desplats, saying that in his opinion one-third of the pregnancies were aborted.

The Bishop of Barking. In Liége?—*A.* Yes. Liége is a sort of Sheffield of Belgium—a large manufacturing town.

THE SECRETARY. What action, then, does the Catholic Church take to enforce its teaching upon the individual?—*A.* Entirely by refusing the Sacraments to those who will not obey.

Q. Is that nowadays effective?—*A.* Absolutely. You say to the people, "This is not lawful," and they obey. Some may say, "This is a hard saying," and go away. But none would go to Holy Communion if refused absolution.

DR. GREENWOOD. In one of the references the whole of the method and process of artificial restriction is definitely condemned as a grave sin?—*A.* That is unequivocal.

Q. On the other hand, times and seasons are permitted?—*A.* Yes.

Q. The question we put to the Witness last time was: There has been no discontinuity between these in choosing times and seasons or anti-conceptional means—the object is not to have children?—*A.* Yes.

Q. Then is it logical to allow the one and refuse the other?—*A.* Well, I think you have to take it on the general principle that persons are not bound to exercise the rights of marriage at any particular time. They must, however, exercise them in what we call the natural way. In limiting themselves to the *tempus ageneseos* they do exercise them; and then, as there is always a possible chance of conception, we cannot say that the end of procreation is absolutely excluded, because they perform an act which of itself tends to that end, and which even in that restricted period can produce, and does produce, that end. I think that is the only answer I can offer.

Q. That really raises the second question. You refer here to the undoubted fact that many of these anti-conceptional devices do not act as it is proposed they should—they do not prevent conception?—*A.* Yes.

Q. Could not that be defended, therefore, on precisely the same lines on which you have defended times and seasons?—*A.* I say there is a distinction, because in all these cases a direct and mechanical obstacle is put to the act. In the case of the other there is no direct or positive obstacle.

Q. I see the distinction. Just one other question, which is perhaps a medical question. Take the case, for example, of a woman with an extremely narrow pelvis which definitely predicated that a living child cannot be born. Would you regard that simply as one of the hard cases in which absolute abstention must be practised?—*A.* Yes, certainly.

Q. Incidentally, with regard to this question that another

member of the Commission raised about a propaganda, would it not be injudicious to inform the members of the Church that these methods are not effective or may fail, because might it not raise a difficulty? Supposing a person is perfectly satisfied that they were effective, the way it is put, I mean, suggests it is not only a sin, but it may not even be a successful sin?—*A.* I quite admit that. But that is only a secondary argument. I say that is an argument deducible from reason. Some people come with their minds convinced that if only they can use these anti-conceptional methods or these appliances they are perfectly safe, and that is—their sense of safety is the great temptation to use the method. I think if you throw doubt on the efficacy of the method—it is a much lower motive, I admit—you do to a large extent weaken the basis of the temptation.

Q. It is an appeal to the mixed elements of human nature?—*A.* Quite.

The Rev. F. B. Meyer. In dealing with these cases you would not make a distinction as a Church between the people who were selfish in their evasion of child-birth and those who through poverty, or to the number of children born, or for some other such reason, would make it unwise for them to continue having children?—*A.* I am afraid we cannot weaken the principle at all—there is, however, a perfect distinction as to their degree of blameworthiness.

Q. When I have seen a selfish reason for prevention, then I have denounced it as a sin; but when I have seen the husband and wife considering questions of health and perhaps the woman has already borne five or six children and could not bear more without imminent danger, and on the other hand the man could not contain himself, it did seem to me in the sight of God to make all the difference?—*A.* I would not admit that a man cannot contain himself. He has got to contain himself, as I cite elsewhere.

Q. I think there is a great distinction between the two?—*A.* In degree of hardness and blameworthiness I admit at once.

The Rev. Dr. Horton. That is to say, if a man did act on this suggestion there would be a lighter penalty in Confession?—*A.* We should consider there was not the same degree of malice in the offence. The same way as an unfortunate man separated from his wife by business who falls into some sin of irregular promiscuousness with a woman; that is not the same thing as a man living with his wife who commits adultery. Not that the sin is in

either case to be passed over, but the degree of malice is much less.

THE REV. F. B. MEYER. In answering Dr. Greenwood I did not feel that you made a distinction which I should have thought would be made between using mechanical appliances to stop conception and adopting that period in the month in which it would be less likely. Is not there a very great distinction between those two? I mean the selection of certain days in the month would be altogether another and a more natural way of preventing conception than the mechanical?—*A.* I think that what Dr. Greenwood had in his head was that both people started out with the same end in view.

Q. One would be disposed to use the word sin for mechanical prevention. Would you be equally prepared to use the word sin for what seems a natural provision?—*A.* By what example? What do you mean by "natural"?

Q. Choosing certain days in the month?—*A.* That is perfectly allowable.

Q. Would you call that sin?—*A.* No.

Q. Suppose a couple desired to prevent child-birth. In the case of using a mechanical appliance I should speak of it as being a sin against the laws of nature. But supposing, with the same motive, they adopted what I thought a natural method, that of choosing certain days in the month, I should not apply the name sin to that, although they equally desire to escape having children?—*A.* We do not apply it, but what we say is, it is a lower plane of conjugal perfection, for after all, as far as it is efficacious, it does avoid procreation.

THE CHAIRMAN. Would you not threaten these people with loss of the sacrament?—*A.* No; they would be on a plane of legality.

THE REV. DR. HORTON. Does the Catholic Church ever undertake in cases where a restriction of the birth-rate might be obviously expedient to suggest ways by which it can be restricted without sin? For instance, there are cases. I should have said that was the case in certain parts of Ireland where the birth-rate has been excessive, where it is obviously desirable to prevent the population encroaching upon the existing means of support. Now, where it is desirable to restrict, does the Church find no way of restricting?—*A.* Well, first of all, I would not accept the premise to begin with. I think Ireland, if you exclude the mountains and the lakes and the bogland, is about one fifth the area of Japan, and Japan maintains about fifty millions,

and Ireland has a population of about four millions. I do not accept that there is any risk of the people not being maintained.

Q. You would not help the people to restrict the population?—*A.* We might exhort continence.

Q. There is no case in which that has been?—*A.* No. It has never arisen, as far as we know.

Q. We are face to face in this Commission, I imagine, with a large party of people, the Neo-Malthusian party, who feel that when the time does arise in the interests of the community, there should be a restriction of the birth-rate?—*A.* Yes.

Q. And we want to face that and see how that is to be met?—*A.* I do not accept it at all. For one thing, Malthus, as I understand him, was afraid we could not all get fed, and therefore you must shut down the springs of life because there might not be enough food. Neo-Malthusians do not take it on that basis, but say, "We should like two very fine, well-brought-up and well-educated children rather than six who have to take their chance in life."

Principal Garvie. Would you not say, in view of the rapidly declining birth-rate in this country and Germany and America, that there is no reason for general measures in the interests of the population to produce a decline of the birth-rate, but rather need for discouraging the unnecessary use of such measures?—*A.* I should have thought so.

The Rev. Dr. Horton. I suppose you take the ground, not an economic ground at all, but a religious ground. You take the ground that wherever God sends children there will be means of support?—*A.* Certainly; if every one does their duty. Not in Ireland, where it all comes over here, or did before the changes in the Land Laws.

The Secretary. Why do you call it unnatural to control the results of intercourse?—*A.* Well, one has only to ask what are the diverse organs of the two sexes designed for? We say for procreation. If used at all, the primary effect must never be excluded. That is the principle.

Dr. Saleeby. Monsignor Brown refers to the physical injury which might result even from the skilled use of appliances and other methods. But there is no reference in this paper to the physical and psychical injury which may result from continence in both sexes.

Mrs. Scharlieb. I quite agree; but we are not concerned with that, because that may apply to the unmarried.

Dr. Saleeby. Quite so. But considering the problem of the married, would it not be strictly fairer to recognize

that while physical injury may result from the use of appliances, it may also result from continence?

THE WITNESS. On the part of married persons?

DR. SALEEBY. Yes.—*A.* Then I say if they are not prepared to take the use of marriage with its natural consequences, I am afraid they have to take the other alternative. We take it this way, that they entered into marriage primarily for the bringing of children into the world. After a time they say, "No, we are not going to be onerated with these any longer, but we wish to exercise the rights of marriage"; and then all the devices and all the suggestions come into play to secure them the rights of marriage without the consequences.

THE CHAIRMAN. In the case of marriage between two elderly people I suppose you would consider such a marriage would be voidable, but not void?—*A.* No, it is not voidable.

Q. Supposing a man was too old to consummate the marriage?—*A.* If there has never been any complete sexual intercourse—which is a difficult matter for physiologists to define—then the marriage is voidable.

Q. You would not object to that kind of marriage?—*A.* Not at all. People of great age can marry.

DR. NEWSHOLME. May I ask on that—it is not a medical point, but a question of interest—how the sacramental character of marriage can be made dependent in the completeness of the physical act?—*A.* The sacramental efficacy we hold is a spiritual aid which is given to people who can enter this state, and this state is the state of actual or, at least, possible sexual intercourse. If you cannot get the *sine qua non*, then the state does not exist.

THE REV. DR. HORTON. There would be no sacramental marriage which was not consummated?—*A.* It is not a marriage if consummation is impossible.

Q. Then is the sacramental grace conditional on a subsequent event?—*A.* Do not misunderstand me. I was referring to impotence.

DR. NEWSHOLME. I also.—*A.* If two persons who are perfectly capable of intercourse choose to live continent after they are married, it is still a marriage because they have mutually handed over to one another the right to call upon one another to render the rights of marriage.

THE CHAIRMAN. I understood that that was not so?—*A.* No. I have said that where sexual intercourse could not take place—I have said where impotence is proved there is no marriage. The position is that they are bound mutually, if requested, to render the rights of marriage; but having been married, they may both mutually forgo them.

DR. SALEEBY. I cannot begin to understand where is the ethical warrant for saying it is right to bring, say, imperfect children into the world, and, on the other hand, wrong to use a mechanical bar to the begetting of such children—what standards of right or wrong, whether in Holy Writ or outside it, do you refer to?—*A.* We only take marriage as the Divinely appointed means of procreation. It is a step which is not compulsory. The individual need not accept it; but if he does accept it, he must accept it for what it is; and therefore if he does exercise the rights of marriage, he must exercise them in a way which of itself is not calculated to defeat the end.

Q. Of course, conditions which give rise to deaf-mutism or syphilitic infection may be imposed on the individual without any knowledge of his own, and that condition may supervene upon married persons. Then it is right for them to beget syphilitic children, but wrong for them to have intercourse by the use of means which we may say to be physically innocuous?—*A.* In one case the disease of the parents being transmitted to the child is an accidental consequence.

Q. Of what?—*A.* Of the intercourse. Intercourse in itself is not designed to give syphilis to the baby, but to form a baby.

Q. Yes?—*A.* From a particular temporary condition of the parents or their constitutional condition, it may be most likely in human estimation to transmit that disease. We cannot say that they are thereby debarred from using the rights of marriage, although we should counsel them not to.

Q. It would be less wrong for them to undertake that extreme probability which in certain definite cases that can be named amounts to certainty—it would be less wrong for them to do that than to use mechanical appliances?—*A.* Yes, certainly.

Q. And why?—*A.* I can only get back to the primary principle—what is marriage intended for as revealed religion teaches us?

DR. NEWSHOLME. That is a sacramental view of marriage?—*A.* Yes. We should say that of marriage taken as a contract even between Pagans. It has a sacramental character superadded to it when contracted between Christians.

DR. SALEEBY. Let us take the case of two hereditary deaf mutes.

THE WITNESS. I should stand to the principle even in that case. Certainly we should do our best to deter them

from marrying. At the same time we could not refuse them.

Q. You would not counsel them to marry but not to propagate?—*A.* If they marry, they must take the consequences.

Mrs. Scharlieb. Or abstain?—*A.* Yes.

Dr. Saleeby. Or rather the child must take the consequences?—*A.* There was a letter sent out by the Rev. Mr. Phillips, of Bloomsbury Chapel, and it has put a certain question, through Mr. Marchant, to myself: "Are the regulations which he lays down the Christian ideal or the ideal adapted to meet the law and undeveloped state of human nature? With all due deference to the two divines who have given evidence, I doubt whether the true Christian or true moral ideal has yet been stated. The highest morality surely insists that no appetite should be used for self-gratification, but for the furtherance of life. A man does not eat to get pleasure: he eats to live. And on a parallel the sexual instincts are only to be exercised to produce life and not for the sake of mere pleasure. I grant this is a high idea seldom preached or taught and rarely attained, but once lower it endless liberties will be taken. I have not made myself, perhaps, as clear and as definite as I could wish." Well, he takes a parallel between the appetite of eating and the sexual appetite and gratification in both cases. My answer would be that both these appetites, or desires, are implanted in the human being for a definite object—the desire for food for the conservation of the individual; the desire for sexual intercourse for the reproduction or the conservation of the race; and that we are impelled perfectly lawfully both to eat—have a slice of bread-and-butter and a cup of tea in the afternoon, even though we are not starving, but as part of a general programme of nourishing the body; and persons who enter the married state are impelled by a perfectly lawful appetite, that sexual appetite, towards the reproduction of the race. If in the one case I satisfy my appetite for the preservation of the individual in a right and due manner, in a manner calculated to attain its object, to nourish me and not to injure me, I am doing a perfectly lawful and, as we should say, meritorious thing, because I am following an appetite or desire which is divinely appointed. I apply the same parallelism to the sexual relations. It is only the perversion of them, or the excess, that is below the Christian ideal. In saying so I should add that I do not mean to say that that carries with it the corollary that every one ought to marry.

The Rev. F. B. Meyer. Does not the same parallel hold

good with regard to the continence or moderation to which we referred at the early part of the meeting—namely, just as enjoyment of food, which God has implanted in the human heart—we have many cases in Scripture where an abuse of that is sinful. So in this matter with regard to continence or moderation, why is it a sin to have a certain number of children and then emphasize the importance of continence? —*A.* Yes. I think the danger is what we should call Manichæism, that the use is considered wrong even in itself.

Q. That brings me to the other point toward the end of your précis with regard to State aid. One would first have to be sure that the procreation by the many, that that has a proper end in view, and has the wealth of the State in view, and not simply the indulgence of the animal appetite, the personal pleasure, before one could impose on the State its duty to help in the case of large families. It would be rather a difficult matter to deal with?—*A.* I admit there are practical difficulties.

Dr. Newsholme. Would you wish to distinguish between worthy large families and unworthy large families?—*A.* No, I should not. I think the State can do a very great deal as we do now to help children to rise.

Q. I should like to ask this question: Have you gone into the evidence as to the degree to which heredity works mischievously in the lower strata—for instance, in the East End of London, in producing a decadent race? There is a good deal about it in the Report of the Feeble-Minded Commission. I gather that you are inclined to think that the influence of such heredity is relatively small as heredity pure and simple, apart from removable influences such as syphilis, and so on?—*A.* And apart from personal vices before procreation, of the parents, to which you have to look for a good deal of the causes.

Q. So that if there were any State call for subsidization of families, you yourself would deprecate very strongly any distinguishing between decadent families or so-called decadent families, and non-decadent families?—*A.* Quite; and I think I should do it also on utilitarian and economic grounds. You apply the remedy if you do it, and get a better lot. You have to work through some period of trouble, no doubt, and the best way is to better what you have got, not to limit the supply.

Dr. Greenwood. I suppose you would agree that there are certain diseases about which hereditary transmission is not, and never has been, disputed, such things as hæmophilia. You seemed to imply in your answer to Dr. Saleeby

that the attitude of the Church about fruitful intercourse in this case was rather in the nature of a non-possumus, that you did not feel justified in laying down any statement that it was wrong to bring into the world defective children. Your knowledge of theology or the tradition of the Church does not warrant any such statement?—*A.* Yes.

Q. Still, I wondered whether the doctrine of the question of development which Newman pointed out in answer to the objection that some views of the Modern Church were different from those of the Catholic and Christian Church of the early days—he took the illustration of a curve, which is very different at one point to another, although it is the same curve. In the same way the fact that there is no positive prohibition to bring into the world unhealthy children, whether the principle of development does not apply to that too—certain things which are condemned in the New Testament and not specially condemned in the Old—whether in the same way it is not a question of the degree of culture to which a people has reached as to what doctrine would have any meaning to them. To people addressed two thousand years ago a question of heredity doctrine would be meaningless, but it would not be meaningless nowadays—whether the Church is not the authority now?—*A.* I follow the reasoning perfectly. But I cannot see how there can be any departure from the principle that the individual has the right, if he can find another person willing to enter the married state with him, to do so. I cannot find any authority for saying that every possible physical consequence shall be prohibited. We have had a weakening of the hypothesis by saying certain things are not inevitable, but you take me up to the highest point of certainty, and say certain things are inevitable. Even then I think we have to leave a good deal to the supernatural, rather than say to the individual, "You are shut out from this as a precaution against the conditions of your nature. You are thus condemned to illicit gratification if there is to be any gratification." I do not think there is any chance of it being modified or extended in that direction—by beginning to exclude certain classes as what you would call non-nubiles.

Dr. Saleeby. But they may marry and not propagate? —*A.* Perfectly. But I understood Dr. Greenwood had taken the case where normal results would follow, where those persons would have intercourse, and to avoid the transmission of disease to their progeny, would not the Church consider the narrowing down of the field of the nubiles?

The Rev. F. B. Meyer. If the husband and wife made a contract afterwards—that would not be considered a sin? —*A.* Not at all, because we consider the mutual obligation they enter into is to give the power over their bodies to each other; it is a mutual obligation, and a mutual obligation is only dischargeable on the demand of one party. If both forgo, then there is no obligation.

Dr. Greenwood. But I think you said you would not exclude the possibility of creating a new non-nubiles class as being outside the power of the Church. The Church could not possibly alter a fundamental doctrine. But you would not regard this as a thing which might not be taken under the consideration of the Conclave?—*A.* It all turns on what we say is included under divine law. If it is *de jure divino,* then there is no power to modify it; but if any portion is not, then there is power. That is the basic principle, but I am sure the principle is that the liberty is conferred on the individual by Almighty God, and therefore the Church cannot say, "You shall not have that liberty." I think that is the answer.

Dr. Newsholme. I take it you would agree with me if I were to suggest that the cases of truly hereditary disease, such as deaf-mutism, not due to syphilis and hæmophilia, and the like, are relatively uncommon, and that that is a very minor part of the whole problem of the possibility of the conveyance of desire?—*A.* Yes; but it does not meet Dr. Greenwood's principle that he has put to me.

Dr. Newsholme. Quite.

The Chief Rabbi. I should like to ask the following question, if I may: Your condemnation of Onanism is absolute?—*A.* Yes. Absolute.

Q. And sometimes the contingency arises when a wife refuses to submit to Onanism in any shape or form, there is the alternative of promiscuous intercourse by the husband? —*A.* Yes.

Q. Which is the less grave violation of moral law according to the Catholic Church—Onanism or illicit intercourse?— *A.* I will not put it that way. I should say they are both equally grave; they are both grave sins.

Q. I ask it for a perfectly legitimate purpose. I would say that adultery is a great violation of the moral law. Is Onanism on the same line, or is adultery higher than Onanism or lower relatively?—*A.* In other words, you mean to avoid illicit intercourse may the wife submit to Onanism?

Q. May the wife submit to Onanism with less moral offence than drive her husband to illicit intercourse?—*A.* I

should say not. We have given cases where a wife, not an accomplice, as we should say, is entitled to have intercourse if the husband persists in Onanism.

Q. But if he says, "If you do not acquiesce I go elsewhere?"—*A.* No, certainly not.

Q. Whence do you deduce this absolute uncompromising view of marriage?—*A.* That marriage is primarily designed for the procreation of children.

Q. Where do you get that? Is that Genesis i., or is that tradition of the Church?—*A.* It is what we should call the constant teaching of the Church from the beginning.

Q. In other words, the tradition with a capital "T"?—*A.* Certainly; and we should also base it on the Genesis argument of Scripture.

Q. Genesis i, "Be fruitful and multiply?"—*A.* No. The act of this man Onan, where it is said he did a detestable thing. We should say there was a proof from Scripture, a proof from tradition, and a proof from reason. If I had to prove a thesis, that is how I should base it.

THE SECRETARY. You do not admit that intercourse may take place for affection apart from the possibilities of child-bearing?—*A.* Not excluding, not doing anything to exclude. It can because it is allowed on the part of couples where the woman is beyond child-bearing.

MRS. SCHARLIEB. And also during pregnancy?—*A.* Yes.

THE SECRETARY. That is for affection minus preventive means?—*A.* Yes.

Q. The use of mechanical means really makes all the difference?—*A.* Certainly.

Q. If the same effect can be brought about by overfeeding or over-study, would you prohibit that?—*A.* No; because those are not direct means.

THE CHIEF RABBI. And of medicine?—*A.* Of course. Any anti-conceptional methods. I do not know really what anti-conceptional medicines are.

DR. NEWSHOLME. There are none.

THE CHIEF RABBI. I am only going by ancient writers. But if there were a fluid medicine which a woman could take one week and the next week she could have intercourse without its natural consequences following?—*A.* That would come under the head of Onanism.

Q. Onanism applies to the woman as well as to the man?—*A.* Certainly. If a woman uses a pessary—under the generic term we take Onanism as meaning mechanical means of whatever kind to defeat the end of procreation.

Q. A douche as well?—*A.* Yes. There are a whole

number enumerated. There is *coitus interruptus*, the condom, various classes of pessaries, and Forel mentions some anti-conceptional powder that the French use, which they inject before coitus.

Dr. Saleeby. It seems to me the finest line where you draw the distinction is between *coitus interruptus* and intercourse in the mid-menstrual period. One you admit and the other you condemn. *Coitus interruptus* is not mechanical?—*A.* No; but the act is not completed, we should say, in a natural manner. In the other case it is, but no result may actually follow.

Q. I take it you would reprobate the cutting out of organs to prevent the flow of the ovum?—*A.* Yes.

Q. You are, of course, aware that there are laws in Indiana and elsewhere making it legitimate for the State to perform this act?—*A.* Yes; several States have such laws.

Q. You would totally condemn sterilization?—*A.* Oh, yes.

Dr. Newsholme. But you would have no objection to segregation in the interests of the State?—*A.* That I object to. That is to us absolutely prohibiting the individual from exercising his liberty to get married.

Dr. Saleeby. You are absolutely opposed to the segregation of the feeble-minded?—*A.* Now you are pushing me. In the sense of getting them away from the rest of the community and improving them, we should be with the community; but if you say compulsorily lock them up and say they shall not marry, we should not sanction that. I mean putting them under such restraint that they shall not marry.

Q. That you disapprove of in principle?—*A.* Yes.

Dr. Greenwood. That is hardly a question within the province of the Church. Is it for the State, just in the same way as military operations and questions of national security, of which they are the best judges?—*A.* In all countries where the Catholic Church is very strong most of the civil and religious difficulties arise over marriage. For instance, in Austria and Ireland they are exempted from the divorce law; you have to go to Parliament in order to get a divorce, and so on. That is where we do come actually into conflict with the civil power.

Dr. Newsholme. The Feeble-Minded Commission, I think I am right in saying, declined to give any opinion as to whether feeble-mindedness was hereditary or not, but they advised methods of segregation?—*A.* Yes.

Q. So far as those measures are desirable in the interests

of the feeble-minded themselves, you would support them? —*A.* Yes; certainly. I want to be perfectly frank with the Commission. What we would not agree to is that they are to be dictated to, and that the State was to be allowed to take every step they could to prevent their marrying—to punish any official or registrar who married them.

Dr. Saleeby. That is to say, in the case of a feeble-minded person, a person who is not any real danger to the community, and from whom the community is in no real danger, that person must not be in any way prohibited from marrying?—*A.* Yes.

Dr. Greenwood. Of course, the point is not purely a question of heredity?—*A.* No.

Dr. Newsholme. Heredity or not, it may be very undesirable in their own interests as well as in the interests of the children that these people should have offspring?—*A.* Yes.

The Witness then withdrew.

Meeting.—February 5, 1915.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—Dr. C. W. Saleeby.

Précis.

The Witness ventures to ask the Commission to consider the following matters, certain of which have urgently arisen since the Commission began its work: (1) *The Dysgenics of War.* The war is taking many of the best of our young males.[1] A possible rise in the birth-rate during the earlier part of this year, owing to war marriages, will probably be followed by a serious further decline, qualitative as well as quantitative, and in the witness's term "dysgenic." Possible mitigations of the consequences. Facilitation of marriage for soldiers, increased separation allowance for children, and better expenditure thereof. Will the Commission consider these possibilities in its report? (2) *The proportions of the sexes.* Grave relative deficiency of males at home

[1] See witness's paper to the Manchester Statistical Society, November 11, 1914, and in the *Contemporary Review,* March 1915.

and of females in the colonies. The home disparity will be aggravated by the loss of war. Influence on the birth-rate, as already studied by Dr. Newsholme and others, but requiring further attention now. The proportions of the sexes *born* and *surviving*. Remedies suggested: further reduction of infant mortality, which is largely a male infanticide, and emigration to our colonies of suitable women. Polygamy, as lately suggested by certain newspaper correspondence, rejected. (3) *National birth-rates, increase rates, struggle and survival.* Evidence in favour of Woodruff's "Law of population—pressure," derived from Bernhardi and the present facts. The Neo-Malthusian argument, "over-population causes war," cuts both ways. *Under-population* may cause war, inviting aggression. Probability that our Empire cannot be indefinitely owned and policed if it be not peopled. The future populations of Russia and Germany. The white population of our immense Empire is much smaller than that of Germany. *We* shall not kill Germany's children. (4) *The racial poisons.* The Commission may agree that evidence of class distribution of factors of civic worth in true heredity has not been brought before it. Much evidence, however, is already available regarding three of what the witness calls racial poisons—syphilis and gonorrhœa, regarding which the Commission will avail itself of the contemporary inquiry, and lead, on which evidence was given by Sir Francis Champneys, Sir Thomas Oliver and Dr. Reid. The witness would cite evidence to show that *alcohol* is also a racial poison of large importance, causing direct blastophthoria, which may often lead to failure of conception or ante-natal death affecting the birth-rate and survival rate.[1]

THE WITNESS. The first point to which I wanted to refer the Commission was the possibility of our doing anything to compensate for the selective and also quantitative losses of the war; and in that respect, of course, I wanted the help of the statisticians. But I venture to suggest that the Commission might in its Report, or possibly even in recommendations before we report, afford help or advice to the Government, as, for instance, in the matter of allowances. When reading in this morning's *Times* about these allowances there was a point which I did not see referred to—

[1] See especially the contemporary work of Laitinen of Helsingfors, Bertholet of Lausanne, Stockard of New York, and Mjöen of Christiania.

whether an allowance is to be made for the posthumous children of our men killed in the war. Some of us are trying to encourage the men as far as possible to marry before they go. I am doing so for the definite eugenic end, as they are the pick of our men; and this question of the allowance to the posthumous child is one that might be attended to. The question that is coming up now with regard to the provision for these women and children is rather like the discussion we had over maternity benefit two or three years ago; and it seems to me to require continuous attention on the part of people like ourselves, as that most certainly did. I suggest that the Commission might consider the feasibility of its doing anything as a body to help in this respect.

The next point that I wanted to refer to is in its essence statistical—as regards the proportions of the sexes at home and in the colonies. It has always seemed to me a very important matter in relation to the birth-rate. Dr. Newsholme in his little tract on the birth-rate has shown how very important it is to know the constitution of a population before we make assertions, especially assertions of an ethical character, on its birth-rate; and the disparity between the distribution of the sexes at home and in the colonies is very striking. This excess of females at home does not depend on any natural tendency thereto, as there is a constant excess of males born. We do not know what the proportions at conception are; that is to say, I do not know how far the ante-natal birth-rate is selective as between the sexes, but there is already a higher death-rate among the male infants.

The Chairman. And all through life too?—*A.* Certainly. Due to the superior resistance of the female at all ages; and the question I was raising at the moment was whether that factor may not show itself in the ante-natal death-rate.[1] There is much higher infant mortality among males—is that so for the ante-natal mortality everywhere?

Dr. Stevenson. We know nothing whatever about that in this country, because we have no returns of still-births.—*A.* Then may I suggest that this Commission should urge as a still further reason for requiring the registration of still-births, which is required for many reasons, that in that way we could get information as to the incidence of those causes upon the sexes respectively? Even allowing for whatever disparity of incidence upon the two sexes there

[1] Recent figures from the Continent suggest that still-births are as 140 male to 100 female.

may be before birth, there still are born a considerable number more males than females; and it seems to me that the very harmful consequences, as I believe them to be, of the great excess of females—which should properly be called deficiency of males—at the adult ages at home can be remedied in part by attention to infant mortality, which is the beginning of the cause of that disparity. At the present time, according to the standardized figures, there is 14 per cent. higher infant mortality among males than among females. This figure of the higher male infanticide—if one may call it infanticide—is much higher than it used to be—14 per cent. instead of 6 per cent. I should like an explanation of such an extraordinary fact, which I do not understand. Why have the causes of infant mortality within recent years come to operate so much more heavily upon male infants than, according to the figures, they did a few decades ago?

Q. Unfortunately we have to record many facts for which we cannot offer explanations. I am afraid that is one of them.

Monsignor Brown. How far back is that difference?—*A.* I think it is three or four decades.

Mr. Hobson. Is it a gradual change?

Dr. Stevenson. Yes, I think so.

The Witness. The figures seem very striking, and the consequences I suggest are very substantial, as this is the beginning of the process which ends in a great relative deficiency of males in a community which we still want to be monogamous. The other obvious cause is that we emigrate far more men than women to our colonies. I suggest that for us as an Empire this question of the distribution of the imperial population at home and abroad, both as regards sex distribution and otherwise, is a matter of fundamental importance, which we might conveniently call "*vital* imports and exports." The German Imperialists, for instance Treitschke, insisted in the 'nineties on the great importance of seeing that the surplus population of the home country should be distributed to German land, instead of going, for instance, to America. It seems unanswerable from their point of view. We have been arguing the same, many of us, here; and the movement of emigration has been in the last few years very much more toward our colonies than to America. So to speak, we are keeping our children under our flag instead of losing them. This process, whilst desirable, also requires that we should attend to the sex constitution of emigrants, and it is clearly wrong from

the point of view of a healthy imperial development and birth-rate that we should send a great excess of males to colonies which already have an enormous excess of males.

MONSIGNOR BROWN. You say we send them; they go there.—*A.* They go; but we have societies for encouraging them to go, and we are constantly asked to contribute to these societies, and we are told that if we pay £20 or £50 that means one more boy will go to the colonies to found an imperial race.

MR. HOBSON. If the Government took any hand in that one would think they would encourage women of marriageable age rather than men.

MONSIGNOR BROWN. For domestic service, and so on.

THE WITNESS. The girls scarcely go.

MONSIGNOR BROWN. I suppose they look to the immediate labour resources of the country rather than the ultimate?—*A.* Yes, I suppose so.

DR. STEVENSON. They go out as domestic servants and remain as wives?—*A.* Yes.

Q. I think Dr. Saleeby would be interested in a paper by Dr. Snow that is going to be read in a week or two before the Statistical Society dealing with this question of the emigrable—if I may use the word—surplus of women, particularly in this country.—*A.* That is exactly what I want to know about.

Q. He examines the matter from a statistical point of view and arrives at certain conclusions. His conclusion is that we have something over half a million women suitable for emigration who might be emigrated without loss to the situation here.—*A.* Half a million?

Q. Somewhere approaching half a million; 300,000 to 500,000, I think.—*A.* Between what ages?

Q. That is to say, from fifteen to forty-five.—*A.* Reproductive age; half a million available! Then the problem is even much more important than I supposed.

Q. Yes.—*A.* And to colonies in some of which there is a proportion even as high as eight males to one female!

Q. Well, that would only be in a few out-of-the-way colonies.—*A.* Yes.

Q. The difficulty with the colonies, of course, largely is that in the big towns where the women want to go women are already in excess, and it is in the bush districts where women are wanted, and that is just where they do not want to go.

PRINCIPAL GARVIE. I do not think that any woman should be sent "up country" when the country is just

being opened up. I have been through Canada, and I know. —*A.* Not as a wife?

Monsignor Brown. You are arguing the point of view for reproduction?—*A.* Certainly. I am asking if it is not possible for many more women to go than do, as wives. There is a society called the Women's Emigration Society, in which Lady Rücker is interested, which tries to emigrate girls.

The Chairman. I think our Commission might very well recommend that society.

Monsignor Brown. Barnardo's and other societies send out girls.

Mr. Hobson. Not a great number.

The Witness. I am not thinking of children. This Women's Society does not emigrate children.

The Chairman. I do not know.—*A.* I think they emigrate girls of eighteen, and that kind of age. It is adolescence of which I am thinking; going of their own will. This Women's Society sends young women of eighteen, nineteen and twenty. I do suggest that there is much to be said for a humane and carefully-thought-out policy, such as is pursued by this Women's Society, of helping the right kind of girl to go out to colonies where there is a great relative defect of women.

Dr. Stevenson. The Dominions Commission has that point under consideration.[1]

The Witness continued: I do not know whether the attention of the Commission has been directed to Major Woodruff's book on the *Expansion of Races*.[2] Major Woodruff is a very clever writer in the United States Army, and his thesis is that there is a "law of population pressure" very similar to the law of gaseous pressure, and that many of the wars of history which we have called dynastic or religious have in fact been expressions of this law of population pressure. It is a most suggestive volume. It is the more interesting to me since this war began and I have read the German militarists, for I find in Bernhardi and in Treitschke, along with all the rubbishy stuff, that when they talk about sheer numbers of population they state that if one nation increases rapidly in numbers as against a stationary neighbour, *e. g.* Germany and France, that war is almost inevitable in following.

Mr. Hobson. Why is it more difficult for Germany to

[1] See Dr. Snow's paper, *Journal of the Royal Statistical Society*, May 1915.

[2] Heinemann.

bring in an increasing proportion of food supply per head? In recent years she has done so. In spite of her growth of population her food supply per head—I am not sure of this—counting the supply brought in, is as great as that of France, or greater. The mere fact that they occupy a given territory does not determine the thing, provided they can get access by transport and exchange to food supplies outside.—*A.* And work hard enough.

Q. The working hard comes from the law of increasing returns—the greater productive effort of labour which a greater population will give, up to a certain point.—*A.* Will you either read this book, or give us a criticism on it?

Q. I should like to read it.—*A.* Would you in some way help us about this?

Q. Certainly.—*A.* Because I think it wants an economist's criticisms upon it. It seems to me a most powerful argument. Dr. Drysdale and the whole of his school who want us to cut down the birth-rate are developing it in their journal, *The Malthusian.* They state, "Over-population causes war," and they are using the present war as a great argument in favour of Neo-Malthusianism.

Q. Of course you know that German emigration has diminished in recent years?—*A.* Yes.

Q. Even before the reduction of their birth-rate I think that was so?—*A.* And also I find in Treitschke and Bernhardi the argument that German emigration ought to be diminished in order that there shall be a sufficient pressure of males in Germany to win a war with; they have been of set purpose pursuing that object of keeping the males in their country rather than let them go to, say, America, in order to have them to strike with.

Q. And the increase of wealth is only incidental.

THE CHAIRMAN. I have seen it stated that one reason why the Germans wanted to keep the men in their country was to keep the Poles out.

THE WITNESS. That is the same argument.

Q. They wanted their country to be peopled by Germans instead of Poles?—*A.* Exactly. Well, I want to suggest to the Commission that there is a tremendous problem here, this question of the international problem, which so far as I am aware our studies have scarcely touched, and which has become a thousandfold more acute since the war broke out. Considering that the populations of France and Prussia—I speak under correction—were approximately equal at the time of the Franco-Prussian War, yet the population of France is now as it then was, whereas the

population of Prussia and of Germany has increased by tens of millions. It looks as if French Neo-Malthusianism had been an inciting cause of the present catastrophe. And the German militarists justify German aggression toward France on the terms of the relative populations in the two countries—they do so explicitly in two books I have here.

Dr. Stevenson. Is not that the same question with regard to Australia in reference to Japan?—*A.* I have a diagram here on that very point. I want this Commission to consider this problem from this point of view as well as the moral point of view which we have been discussing.

Mr. Hobson. Are you sure in the long run that you want to encourage any nationality to emigrate to lands under their own flag instead of foreign lands, seeing that the latter will have the result of producing a larger mixture of races and intermingling the interests across the national and imperial barriers? It will make for international influences as opposed to separatist national influences?—*A.* I agree with you absolutely, with this exception, that we own an Empire which is almost empty.

Q. We do not own it?—*A.* Whatever word you prefer. We assert we "own" an Empire, which is almost empty; and on any such lines as those expressed in Woodruff, and in the very instance Dr. Stevenson has quoted of Australia and Japan, I do not know how we can continue to fly our flag over this Empire unless we people it.

Q. But we do not want to encourage people who would leave this country to go to a country we have to pay them to go to. In the long run do we want to deter a person who would go to the United States of America and pay him to go to Canada instead?—*A.* He creates wheat in Canada.

Q. Then he will go, if it is to the advantage of Canada and to his advantage on the whole—so far as he is acting intelligently—if he is guided by simple questions of wealth production.—*A.* If there is an agent at work with skilfully contrived advertisements for persuading him to go to the United States, shall we say, so that he thinks he ought to go there, ought we not to have a similar agency to persuade him to go to Canada?

Q. We have a much superior one, I assure you. There is nothing in the world to touch the advertising on behalf of Canada.—*A.* I submit to the Commission there is a possibility we ought to be anxious about, the future population—I will venture to call it man power—of our Empire in relation to the problems of the future, that when we have beaten Germany there will be practically as many Germans

as ever, because we shall not kill the German children, who will in due course grow up and become the German adult population as before. I offer this kind of diagram for the Commission to criticize; I have had it prepared for me lately, and I am going to try and improve it. It only expresses a small proportion of the facts, but they look very startling as they are presented this way; that may be, of course, because the presentation may be erroneous. The figures are better known to Dr. Stevenson than to me. *Here* we have Home Population 45,000,000, and at home we are adding under half a million to our population every year. The German Empire with approximately 70,000,000, a much larger home population, adding approximately double—until the war began—to its home population to what we did; say 900,000 as against 450,000, approximately. Is not that so?

Dr. Stevenson. I should think it would be quite that.—*A.* Germany added 900,000, and we with this colossal area—some idea of the distribution of the population of our Empire can be seen here, where we have one to the square mile in Australia, two to the square mile in Canada, and 373 to the square mile at home. No less significant is Japan, with 50,000,000 home population. Of course, she has some influence in Manchuria, which I have not put in. And, as Dr. Stevenson has said, Japan for a long time past, with her high birth-rate and her large home population, has been hungrily looking at Australia, and Australia has made laws to keep the Japanese out. The argument I submit to the Commission is that we cannot say we definitely hold or have a moral right to hold Canada, Australia, and so on, unless we people them instead of merely policing them and flying our flag over them.

The Chairman. Of course, a great deal of this space in Australia is not very nice to live in?—*A.* But a great deal of that is being irrigated on a large scale. Anyway, the Japanese would be glad to live in it if we would let them, but we will not let them.

Mr. Hobson. And the Chinese too?—*A.* Yes.

Monsignor Brown. Is China so very crowded too?—*A.* Yes; but not so crowded as they said it was—about 240,000,000, I think.

Dr. Horton. Will you tell us whether you feel that it does in any sense lessen our anxiety to keep the birth-rate up, this causation of war by population? I gather your suggestion is that if we go on increasing the population we are only preparing for another great war?—*A.* The answer

is that the density of the population in our Empire is relatively very low—we own this extraordinary proportion of the earth, and *this* and *that* are practically empty. There are only two to the square mile in Canada, and one in Australia. Germany, with no outlet and with a far larger annual increase, demands what she calls "a place in the sun."

Q. But supposing we were confined to our own island, would you say that we could not allow the population to increase because an excess of population inclines to war?—*A.* The answer to that would be, relative to what other populations were doing. Germany's argument is as against France with its stationary population—the Germans have repeatedly appealed to the stationary population of France as compared with the annual increase of almost 1,000,000 of the German Empire—they say, "We have a biological right to those French colonies."

Q. You would dispute Woodruff's position?—*A.* No; I think that Woodruff's position is a very powerful one. I think his position, so to say, is a part explanation of the German aggression.

Q. But it is very desirable that this argument should be disputed, is it not? It is an appalling view of the world if we are to suppose whenever a country gets overpopulated it instinctively goes to war, whatever it may call it, a religious war, or otherwise?—*A.* I agree it is a dreadful argument, so looked at. But there is much to be said, on moral grounds, against a dog-in-the-manger policy like that of Australia.

Professor Gollancz. Germany has said, "You have hindered us from colonizing; we could have found room for them if you had allowed us more room in the world."—*A.* Certainly.

Mr. Hobson. Is not that said by Germany as a pretext for obtaining colonial trade? What they want are special markets for trade, and they get support in the country by arguing that there is an over-population which needs an outlet.

Monsignor Brown. Surely Germany is enormously dependent even in agriculture upon foreign labour; they are dependent enormously on Russian labour for one thing, especially in Eastern Prussia; and even for factory labour. Silesia is full of Slavs. There would be work for the Germans at home if they did not bring others in to do it.—*A.* I put it this way: Unscrupulous militarists, wanting Germany to go to war, are able to point to the numbers of German

males as compared with French males; and if they can capture the men they are able to use them. I do not want to be dogmatic, or to assert anything, but it does seem to me this quasi-Darwinian aspect of comparative birth-rates is one which must not escape this Commission. At this moment the total white population of our immense Empire—just over 60,000,000—is very much less than the home population of Germany. It is an extraordinary thing. There are about 70,000,000 of Germans. Of course, some of those are Slavs; but there are a great many Germans in the United States; and we in our large Empire have only just over 60,000,000.

Mr. Hobson. That is very largely because our Dominions won't have population. They could get a good working population in, but they will not have it?—*A.* Quite so. Then the further question arises: *Can* we definitely, should we morally, fly our flag over these Dominions as against nations which are increasing in numbers as the Russians and the Germans are?

Q. I question the use of the word "own," and I do so because Australia will not look to the natural source of labour, and the same is true of Canada and South Africa to some extent?—*A.* And yet you and I may at any moment in the future be called upon to undertake a war for the defence of those relatively empty continents against Japan, Germany or Russia.

The Chairman. Are you not arguing as if we keep the Germans out of Australia, and so on? They are quite at liberty to go there?—*A.* But we are not going to let them fly their flag there.

Q. No; but they are practically independent. There is nothing to prevent the Germans from doing in Canada or Australia what the French have done in Canada?—*A.* No.

Mr. Hobson. We will not let our Indians go to the Dominions.

The Chairman. I do not think your argument applies to the Germans?—*A.* If we assume that the Germans will go under our own flag. We must either people our own Empire, or make it so nice and good and hospitable that the overflow of other nations will be willing to live there under our flag.

Dr. Monro Gibson. That has taken place in the United States and Canada?—*A.* Yes.

Principal Garvie. You may be sure of this, that the German prefers to emigrate anywhere except under his own flag. There are emigrants pouring from Germany to

the United States, yet they cannot fill the colonies they have already; and all this colonial movement for the outlets of surplus population is a movement for the outlet of capital which wants to exploit the natural resources of these countries. Germany has not reached its limit of population which it can support. I am confident of that. It would not load itself with a protective tariff if it were at the end of its natural resources. I think the whole of that argument referred to is a pretext of the militarists.—*A.* Suppose we grant that it is a pretext of the militarists, nevertheless these militarists have the men, as we now see, unfortunately, to use against France. That is the dreadful strength of the argument. There are the German youths getting on for two to one as compared with the French.

Dr. Stevenson. I do not think the increase in Germany will be a large one. The reduction of the birth-rate is going on there, but very much faster than it is going on here.—*A.* Prof. Karl Pearson has argued that the reason why Germany made her "preventive war" this year was that the future increase in Russia would overwhelm her. The increase in Russia is over 2,000,000 annually. Germany wants every man it can get.

Q. The argument was used against Malthus in his own time?—*A.* Yes. As far as I can see you cannot do without soldiers. The German birth-rate is going down; but there is this enormous increase still in Germany.

The Chairman. What was the German birth-rate, 29?

Dr. Stevenson. Yes; it has fallen below 30. It is falling much more rapidly than ours.

Dr. Monro Gibson. It is falling much more rapidly than ours?

Dr. Stevenson. It is falling from a much higher level.

The Witness. There is only one other thing I want to say. It is that I think the attention of the Commission ought to be directed to the evidence, as I believe valid, showing that alcohol is under certain conditions a racial poison, actually destroying the germ plasm.

The Chairman. Dr. Mjöen pointed that out?—*A.* Yes. But more important than his work is the work of Dr. Bertholet of Lausanne, who has made microscopic researches on the reproductive glands of alcoholic subjects in both sexes.

Monsignor Brown. On any large scale, or in a small country like Switzerland?—*A.* He has been working on it for many years, and has made many hundreds of *post-mortems.* I can give the reference to any one who would care to have it.

Mr. Hobson. What is meant by an "alcoholic subject," a subject diseased from alcoholic causes?—*A.* Yes; showing, say, alcoholic cirrhosis of the liver, alcoholic changes in the various organs.

The Witness then withdrew.

Meeting.—February 10, 1915.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—The Very Rev. the Chief Rabbi (Dr. J. H. Hertz).

The Witness submitted the following précis to the Commission—

Jewish Birth-rate Statistics.

There are no reliable figures of the Jewish birth-rate in English-speaking countries, as there are in most countries on the Continent, in which statistics include denominational information. Still, it is commonly stated that the maximum family, both in the United Kingdom and in the United States is the Jewish family. Thus, the *Encyclopædia of Social Reform* declares that to a greater or less degree religious belief everywhere influences the birth-rate; that in New York, for example, we find that the largest family is the Jewish family; next to that is the Roman Catholic, followed by the Protestant; whilst the smallest is the family with no positive religious affiliation. It is furthermore noticed that in districts where there is a large Jewish, especially poor Jewish, population, the birth-rate is considerably higher than the mean rate. Thus, in the 1913 Report of the Medical Officer of Health for the Borough of Stepney, we find that the birth-rate of that Borough was 29·6 per 1000; while that for the whole of London was 24·5 per 1000.

A closer investigation, however, of "crude" Jewish birth-rate figures is as necessary as it is instructive. The mean Jewish birth-rate of New York or London is not a fair index of the size of Jewish families in general. The various social classes in these large Jewish Communities—such as the immigrants, their children, and the native Jewish population—have distinct birth-rates of their own. *In proportion to the assimilation of the various social strata to their non-Jewish*

environment, the birth-rate declines. But if we go to the various continental capitals in which the Jewries are educationally and linguistically more uniform than in English-speaking countries, we make the astonishing discovery—

(1) That the Jewish birth-rate varies greatly in different countries. In some it is higher than in Whitechapel (*e. g.* Bulgaria, 39·6; Galicia, 38; Russia, 36); and in others it is lower than the French birth-rate (Bavaria, 16·2, 1913). In Breslau the Jewish birth-rate (1906) was 15·03, in Westminster the general birth-rate for that year was 16·1; for 1913, 14·2.

(2) That the Jewish birth-rate in Western countries, as in the case of the non-Jewish population, has been slowly but steadily decreasing.

(3) That the Jewish birth-rate, social class by social class, is, even in Eastern countries, smaller than non-Jewish birth-rate—

(1902) Roumania . . .	36 to 40	of the	non-Jewish	population.
(1901) Russia	36 to 52	„	„	„
(1900) Galicia	38 to 45	„	„	„

The causes of this decline are—

(*a*) The overwhelming "urbanization" of the Jew, city dwellers throughout the world having a lower fertility than others.

(*b*) The transference in the course of one generation of nearly two million Jews from a Slavonic to a Saxon environment (U.S.A., the United Kingdom and the Colonies)—from high birth-rate to low birth-rate lands.

(*c*) The progressive subjection of the Western Jew to the economic standards of life and unwritten usages of his environment. The Jewish fertility-rate likewise falls with the rise of prosperity. In America, which to-day contains one-sixth of the Jews of the world, there is a distinct and harsh prejudice against large families ("having a family is not an American ideal!"), and this is affecting every one down to the poorest immigrant, as, *e. g.* the majority of even "tenement houses" boycott large families.

(*d*) The spread of secularism and intellectual unrest among the Jewish proletariat and the weakening of religious observance, with the resultant vanishing of all scruples against artificial restriction.

(*e*) Less marriages per 1000 than the general population. Marriage is also postponed to a later period. There are thus to-day a larger relative number of Jewish bachelors and

spinsters. The increase through illegitimate births is negligible, as the mean ratio of Jewish illegitimate children is only about one-fifth of the ratio among the rest of the population.

(*f*) Intermarriage with non-Jews is on the increase; and "mixed" marriages are very infertile. In Russia 37·91 per cent. and in New South Wales 30·55 per cent. of such marriages were sterile.

(*g*) There is no appreciable Jewish agricultural population to replenish the rate lowered by the city dwellers.

Now although the above causes are operative only among Western Jews—about one-seventh of the Jewish people; the other six-sevenths living in Eastern Europe or recent emigrants thence, having families of five to ten children—still the effects of this appalling fall in the birth-rate are serious enough. They are, however, largely offset by the low death-rate among Jews. Jews everywhere in Europe have a lower death-rate than non-Jews; and the poorer the Jew, the lower the death-rate.

Thus the death-rate per 1000 was—

	Jews.	Non-Jews.
Bavaria (1907)	12·70	21·33
Russia (proper) (1901)	18·08	32·51
Hungary (1900)	16·98	27·21
Roumania (1896–1902)	20·84	28·00
Amsterdam (1904)	11·72	16·85
Lemberg (1903)	19·3	29·0

Owing to the absence of drunkenness in the parents, the better nourishment, and the self-sacrificing care which Jews of all classes bestow on their children, Jews furthermore enjoy a special immunity from the ravages of early death. In 1907 of every 100 infants under one year, there died in—

Frankfurt-on-the-Maine—	
Jews	4·56
Catholics	11·67
Protestants	11·86
Breslau—	
Jews	6·21
Non-Jews	21·72

In Budapest 1901–1905 of every 1000 male children under the age of five years, there died—

Jews	38·5
Non-Jews	89·9
Females—	
Jews	36·4
Non-Jews	76·7

Now what is the Jewish teaching still rigorously followed by more than three-quarters of the Jews of the world, on this vital question?

(*a*) The teachings of the Jewish Church on marriage and the family in general.

(*b*) Its specific precepts and regulations in the sphere of sex and race hygiene.

(*a*) *Marriage.*

The name for the sacred covenant of marriage in post-biblical Judaism is "sanctification," and the marriage-formula in use for some 1,500 years is "Behold, be thou *consecrated* unto me." Marriage is thus no concession to nature, but the sanctification of a natural instinct which is the basis of human society. Judaism does not despise sex, but demands complete subordination of the sensual to the spiritual. All pre- or extra-marital intercourse is therefore absolutely forbidden. Chastity in this sense is a self-evident demand for both man and woman. "Holy shall ye be" (Lev. xix. 2) is interpreted with special reference to sex self-restraint. Manhood means moral discipline.

Marriage has a threefold purpose—

1. Procreation.
2. Life-companionship.
3. The education of children.

Procreation.—Gen. i. 28, "Be fruitful and multiply," is a primary, positive religious duty obligatory on every man. Jewish law does not consider it necessary to urge the duty of marriage and love of children upon woman. (Cf. "Give me children or else I die," Gen. xxx. 1, spoken by the Jewish matriarch.) The number of viable children which it is incumbent on a man to have is not, however, unlimited. If a widower has two children he need not contract a second marriage. Castration is a heinous crime; and the prohibition of infanticide in any shape, whether post- or ante-natal, is recognized as a dictate of natural religion, and therefore binding upon all mankind. Onanism, forbidden by all schools of Jewish moralists, was declared a *mortal* sin.

Life-Companionship is a co-ordinate aim in marriage. "It is not good that the man should be alone," Gen. ii. 18, *i. e.* it is impossible for man to lead the full, human life unless he has "an help meet for him." Man is a social animal, and is only made man through family life. This companionship is for life.

Education of Children.—Each child is entitled to the care

and companionship of *parents*. This especially refers to moral and religious upbringing and training for honourable livelihood. Jewish religious education does not include detailed sex-teaching. Indeed, the foundation of all sound education in sex must consist in *dis*tracting the adolescent mind from sex, not in inducing it to dwell on sexual matters. Much of present-day sex-instruction is turning out to be a cure that is worse than the disease.

(*b*) *Sex and Race Hygiene.*

Though "conjugal rights" (Exod. xxi. 10) are a husband's duty—the wife's consent is at all times the indispensable pre-requisite. Unreasonable and prolonged denial on the part of either husband or wife entitles the other to divorce. Exercise of such rights is discountenanced in a state of alcoholism, and in times of individual or social psychic depression. It is absolutely forbidden during the weeks following child-birth, as also during the twelve days of the menstrual period (seven "days of purification" being each time added to the mean five). The beneficial effect of such monthly abstention cannot well be over-estimated.

Jewish regulation in the sphere of sex-life has proved an excellent protection against individual as well as racial degeneration.

In the larger field of race-hygiene, Judaism aims to promote marriage in the prime of life among the best types of man and woman. As ill-assorted marriages are liable to be followed by "unfit" progeny, principles of selection in marrying hold a remarkably prominent position in the Jewish treatment of the subject. Without neglecting the desirable moral, intellectual, and æsthetic qualities in the man and woman to be chosen, the welfare of the future children was always the chief object in view. Minors, imbeciles and deaf mutes, all incapable of legal consent, are, strictly speaking, incapable of contracting marriage. Stern warnings are repeated against the marriage between an old man and a young woman, or a young man and an old woman; as also against marriage with an epileptic, a leper, or one afflicted with any other loathsome disease.

In the light of Jewish experience, poverty can on no account justify "race-suicide." Overwhelming evidence in the contrary direction abounds in the annals of every virile people. Some of the best and the greatest men have come from poor and prolific Jewish homes. Many difficulties can be overcome by State endowment, free education

for the benefit of large families, adjusted taxation, etc. The resources of civilization have certainly not yet been exhausted in the endeavour to avoid the penalization of parenthood.

Mr. Marchant. Do you wish to add to the précis before the questions are asked?—*A.* You will notice that quite early I say, "It is commonly stated that the maximum family, both in the United Kingdom and in the United States is the Jewish family." In the United States the statistics I can give are rather old, I admit. But the figures are (1890) for the white population, 26; for the coloured 29; and for the foreign 38; so the Jewish family is larger than the negro family.

Then I say, "Furthermore, in America, which to-day contains one-sixth of the Jews of the world, there is a distinct and harsh prejudice against large families," and so on—in the slums even, a large family has difficulty in renting. When it comes to the better classes, everything is done to discourage a large family. These are some of the influences that are at work tending to reduce families even below the French two-children standard.

Monsignor Brown. Is the total population of Jews in the world an ascertained figure?—*A.* No, it is not an ascertained figure. It is approximately something between thirteen and fourteen millions.

The Chairman. You have been proving that the Jewish birth-rate is higher than the non-Jewish, and then you say, "(3) That the Jewish birth-rate, social class by social class, is, even in Eastern countries, smaller than non-Jewish birth-rate." Is "smaller" not a mis-print for "larger"?—*A.* No, that is quite right.

Q. In America the largest family is the Jewish?—*A.* Quite so; but you cannot generalize from the first half generation of the vast immigrant population. For some time the immigrants continue to have large families. As soon as they become Americanized, if you then compare social class by social class, you will find that the Jewish birth-rate is smaller.

Q. My second question deals with what you say; "Onanism, forbidden by all schools of Jewish moralists, was by them declared a mortal sin." Would you use "Onanism" in the way in which the Roman Catholics do, referring to *coitus interruptus* or mechanical means?—*A.* It is used in the widest sense.

Q. Then with regard to the rules you give about the twelve days. Of course, it is very difficult to answer, but is that really generally observed by Jews?—*A.* Jews are divided into two classes, observant and non-observant.

Q. The majority of doctors say that the majority of children are begotten in the first week after the period, so that one would expect that that rule, if strictly observed, would diminish the birth-rate?—*A.* There is one gentleman in this country, Dr. Redcliffe Salaman, who has made a deep study of the subjects of heredity, eugenics, and so forth. He has tabulated the results of families where the days of purification and so on are observed with absolute certainty, and he has found that it does not affect the fertility or the non-fertility. He tells me that he intends to publish the results.

Mr. Marchant. I cannot understand how it can be that the Jewish birth-rate is less than the non-Jewish in every social class, and yet the aggregate birth-rate is more. How is that? I do not understand it?—*A.* Because we have many Jewries. London and New York, or any of the Western Jewries which receive immigrants from Eastern Europe, are not homogeneous. Each of these communities socially and educationally belongs to five or six different strata. Crude mean birth-rate statistics in such cases are, when loosely employed for the purposes of generalization, quite misleading. Where you have uniform Jewries, there you can generalize from statistics. In all such uniform Jewries, the Jewish birth-rate is small and constantly falling. But the immigrant belongs to a different ethnic group altogether, he comes fresh, say, from Russia or Roumania, he has a totally different family atmosphere, different traditions, and different points of view on vital questions. With his assimilation to the native Jews in the various countries, the Jewish aggregate birth-rate ceases to be the highest, as in New York and London; and tends to become the lowest, as in Berlin or Prague.

The Bishop of Barking. I am not clear in my mind how it can be class by class different from when all the classes are taken together?—*A.* If you take the Kensington Jew, for instance, he has a birth-rate of 2½, and the Whitechapel Jew has a birth-rate of 8 to 12. Now these "Whitechapel" Jews—the immigrants—far outnumber the class I would call the Kensington Jews, and they come here as adults in the most fertile period. I believe that makes the point quite clear.

Monsignor Brown. You cite the immigrant Jew. How

does the immigrant Jew compare with the immigrant who is not a Jew but of the same social class, say an Orthodox Pole, who comes over to the East End of London?—*A.* I should say there are next to no statistics on that.

Q. I cannot see how you can compare your class—you say "compare social class by social class"—I do not see how the comparison can be made?—*A.* If you take 100 Jewish professional men and get their mean birth-rate, and you compare this birth-rate with the mean birth-rate of 100 non-Jewish professional men of their class, say Catholics, you will get the comparative birth-rate for that class.

Dr. Stevenson. You would compare the birth-rate of the immigrant Jew rather with the birth-rate of the population from which he comes and the birth-rate of the same social class in England perhaps?—*A.* When the immigrant comes to this country, he comes to the lowest slums. Now what is the birth-rate of the lowest slums? I am under the impression it is rather high; and I believe that the Jewish birth-rate is lower than the non-Jewish birth-rate in that social surrounding.

Q. I thought there was something here to the effect that the Jewish immigration had raised——?—*A.* Yes, but this is only during the first few years. It ceases to be the case as soon as the immigrant or his children are Anglicized.

Principal Garvie. The statistics you give hardly support such a wide generalization; I should think Roumania, Russia, Galicia and so on would be rather exceptional as regards the fertility?—*A.* But these countries contain two-thirds of the Jews of the world.

Q. It is quite true about that, but in Britain you would find your generalization does not hold. It does not follow you can extend it because two-thirds of the population live in those three countries; you can hardly say it is true of those who live under different conditions. I should question whether in Britain such a generalization would hold, unless there is distinct statistical evidence to support it?—*A.* I start by saying that there is no such statistical evidence as on the Continent. My impression is that the Jewish birth-rate, of course the mean birth-rate, is very high, even in London. But if you leave the immigrant population aside, and then analyse class by class you will find that the native Jewish birth-rate is smaller; and this is also the opinion of the few men who in the absence of exact statistics have made a study of the question.

Mr. Marchant. And the cause of that general rule is?—*A.* It may be ethnic.

THE CHAIRMAN. What advice would you give to an epileptic who asked you whether he should marry?—*A.* I should strongly advise him not to marry.

MR. MARCHANT. You would enforce the canon law of your Church?—*A.* These laws have merely a moral sanction; Jewish Jews observe them.

Q. If they disobey, you have no disciplinary method of dealing with them?—*A.* No; purely a moral influence—moral suasion.

Q. You mean by this ethnic change the disturbance in the reproductive rhythm in the race by a change of country?—*A.* You asked me how I accounted for the general rule that the Jewish birth-rate is not as high as the non-Jewish in Roumania, Russia and Galicia, etc., and I say it is possibly an ethnic difference.

MONSIGNOR BROWN. You say, "Intermarriage with non-Jews is on the increase; and 'mixed' marriages are very infertile." Does a Jew, man or woman, who wishes to contract a marriage outside their religion—do they have to get permission?—*A.* The marriage can only take place if the non-Jewish party goes over to Judaism. This permission is not always granted.

Q. No; but when it is granted, it would be granted on what terms?—*A.* Purely conversion.

Q. So it is hardly mixed marriage in the sense that the parties remain of different religions; it means mixed in the sense of race and not of religion.—*A.* Quite so. The statistics I have given you are, (1) in Russia, where the party goes over to the Russian Orthodox Church, nearly 38 per cent. of these marriages are childless; (2) in New South Wales, which is the other case I mention, it would mean all sorts of mixtures in which one of the parties married is not Jewish racially; and 30½ per cent. of such marriages were childless.

Q. Then suppose a Jew marries a non-Jew without permission—are there no penalties?—*A.* There are no penalties.

Q. Not a loss of membership, or anything of that kind?—*A.* He loses certain synagogue privileges, but he retains burial privileges in consecrated ground. He cannot be deprived of membership in the synagogue, but he will not be given lay office in connection with the synagogue, or religious honours, such as taking a part in the service.

Q. Are the children in such a case treated as Jews?—*A.* Children of a Jewish mother are Jews, and children of non-Jewish mothers non-Jews.

Q. Is that distributed fairly evenly over the United

States, England, Russia and so on, or is there any particular part where the mixed marriages would predominate very greatly?—*A.* Mixed marriages would predominate in countries like Australia or Scandinavia. Where the Jews form a community numerous enough to have their own religious life, inter-marriages are not as frequent.

Q. Would you say they are on the increase owing to the difficulty of finding partners in their own religion?—*A.* It would not be due so much to that as very often to other reasons which enter into the contracting of a mixed marriage —some of these motives not being of the purest.

Mr. Marchant. Have you any suspicion that there is a decline of fertility in the Jewish race—a natural decline?—*A.* Not more than among other Western nations.

Q. Do you think that the acute industrial lives so many Jews are leading is operating to diminish fertility?—*A.* Certainly girls and women who work in factories for ten or fifteen years before they get married—I doubt whether they would have the same capacity for bearing children as the normal Jewish woman of former times.

Q. But then you have also witnessed the love of maternity?—*A.* The love of maternity among Jewesses is very great indeed.

Q. So that the girl who goes to work would incline to become a mother more often than the non-Jewish girl?—*A.* Yes. In the present generation there are fewer marriages per thousand than among the general population, and marriages are postponed to a later period. The Jew is ambitious. The men will not marry until they are independent. In the generation fresh from Eastern Europe this feeling of independence did not exist. In those countries the parents of the bride supported the man for a number of years, in order to enable him to establish himself, or to complete his religious or other studies. But to-day in London that has disappeared absolutely, and both the Jewish young man and girl demand a certain irreducible minimum of decent living and comfort before marrying.

Principal Garvie. Is the age at which the Jewish woman marries younger than the ordinary?—*A.* If you are speaking of the present generation I should say later; of former generations, earlier.

Q. Say, in conditions like Slavonic countries, in Russia, will not the older conditions still obtain?—*A.* No, because the Jew is more and more driven into the cities. Three hundred thousand Jews live in Warsaw, and 150,000 in Lodz; and the result is that you have urban conditions.

THE CHAIRMAN. Have you any evidence as to the average age of Jews when they marry compared in the different countries?—*A.* Austria, Germany, Serbia, Italy, Belgium and France have statistics. In all these Jews marry later. The Jews in the West End of London, and English Jews generally, marry later than non-Jews in the same surroundings.

Q. That, of course, would account for the lower birth-rate?—*A.* Yes, partly.

MONSIGNOR BROWN. To the prohibition of certain practices for prevention, you mention "a few permissible exceptions." What would you allow, then, in these cases? What uses, or methods, or practices?—*A.* Mechanical methods are "an abomination"; there are, however, washings and other morally more or less innocuous methods.

Q. Of an anti-conceptional character?—*A.* Yes; because Jewish law holds that where there is danger of life, such danger of life overrides every other prohibition with the exception of three.

Q. In the case of the exceptions permitted in Jewish law, do you allow mechanical methods in those cases?—*A.* I would not allow them.

Q. Would the law allow these appliances that we have had described?—*A.* When a trustworthy physician gives you an unimpeachable decision that a pregnancy on the part of a woman would endanger her life, or that conception would result in a deformed child, then it ceases to be an ecclesiastical question and it becomes a medical one. If I had to decide such a question I should hand it over to the physician—a question of saving the mother or the child. But to the mechanical appliances there is the strongest objection, because they are classed as onanistic.

Q. But in cases of grave danger to life you will sanction mechanical methods to prevent conception?—*A.* I would in those exceptional circumstances sanction some, not all, methods by the woman to prevent conception.

DR. STEVENSON. I was just going to ask whether in such a case it was left to the conscience of the parties themselves, or whether they would obtain the sanction of their religious advisers?—*A.* Cases of this sort on the part of the observing Jew would be brought to the notice of the Rabbi, and the Rabbi would consult a trustworthy physician before deciding; or the two of them would. Things of this sort happen. Of course, they are very exceptional; but they do happen.

MR. MARCHANT. In our Nonconformist Church I am extremely doubtful whether the members do consult the

Ministers.—*A.* Among the observing Jews they would do so. To the old-fashioned Jew there is nothing unclean and unholy in any question touching family life and family purity.

The Bishop of Barking. We have had some very remarkable evidence given about the use of drugs in order to procure abortion. Do you imagine that extends among the Jews as well as among our people, as we are told in the case of Newcastle?—*A.* I dare say that to some extent the influence of the environment makes itself felt. I cannot speak from personal knowledge; as far as my observation goes, the one uncrushable desire of every Jewish married woman is to have children.

Principal Garvie. Would you put it that a Jew would be to a certain extent denationalized before he consented to methods of abortion?—*A.* Quite.

The Bishop of Barking. But she is not satisfied with one or two children, but wishes to have more?—*A.* Among the leading Jewish families in England there are a number of large families—some of the young people who married eight to ten years ago, I know, looking amongst the very best families, have several children.

Dr. Stevenson. How does that accord with their being less fertile, social class by social class?—*A.* Among the assimilated, the non-observing form a rather large proportion. The Chief Rabbi as a rule mixes with the observing.

Q. But in the other case when you speak of the low birth-rate, it includes the lax Jews?—*A.* Quite so. And, of course, I am led very largely by the statistics which are exact. Here it is very largely a question of a rough guess.

The Witness then withdrew.

Meeting.—March 10, 1915.

Chairman.—The Very Rev. Dean Inge, D.D.

Witness examined.—The Lord Bishop of Southwark.

The Chairman. What we should like you to tell us is what sort of line the Bishops take when they are approached on this subject, as I suppose they are from time to time. We have been able to get from Monsignor Brown a very

clear account of the teaching of the Roman Catholic Church, and an equally definite account from the Chief Rabbi of the teaching of the Jews, and we thought that possibly you might be able to enlighten us a little as to the sort of way Anglican Bishops would answer questions of that nature?—*A.* The question of how to deal with the problems that were presented to the Clergy, and through the Clergy to the Bishops, has been discussed at meetings of Bishops for a long time. As a result of these discussions a memorandum was drawn up which was intended to be a guide to the Clergy and to persons who were engaged in social work; this memorandum was very carefully debated, and eventually it was adopted. This is the paper (same produced). It is not for publication. It is called the "Misuse of Marriage. The memorandum was prepared by a Committee of Bishops and has received the approval of a large majority of Diocesan Bishops." Let me say that one of the reasons why I hesitated to come and give evidence before you was that I was one of the few Bishops who could not give whole-hearted assent to this memorandum; although I agreed with nearly all of it, there was one paragraph from which I very strongly dissented, because it seemed to me to give the position away, and it is upon that paragraph that I consider there comes a real parting of the ways. Would the Commission like me to read this to them?

Q. We have seen that [Bishops' Memorandum, p. 382, closing evidence of Prof. Lofthouse].—*A.* I should say this with regard to my own work: In two directions I have had experience amongst two entirely different classes of persons. One is old friends and old pupils, representing people who are what we call the "well-to-do," who have consulted me when they felt that these difficulties arose in their married life. I have always quite consistently given the advice that if self-restraint is clearly the right course—that is to say, if dictated by reasons of health on the part of the wife, or if it is dictated by reasons of prudence and economy—if it is right in those directions, you will always, if you seek the right means, obtain the strength and the grace to do the right thing, however hard it may seem to be. And in my experience in giving that advice to the men who have consulted me, I have not found any instance in which they have not felt grateful to me for having taken that line. On the other hand, you are dealing there with intelligent people who understand what choice is and who understand what the exercise of

the will is, and appreciate the necessity of strengthening the will and of building up character, and you can make that sort of appeal to them. I can quite understand that the case is very different when you come to deal with much less intelligent or much less well-educated people; my experience in dealing with them at first hand on this question is very limited. I have heard a great deal what Clergy and workers have experienced; they have often said that if you take the rigid line, which I have taken with the friends who consulted me, you are putting a burden upon these others which is more grievous than they can bear; that it leads to estrangement in family life; and, even supposing the man does not form other connections and lead an immoral life, still the old feelings of affection between himself and his wife get impaired, and you will really break up the family life. And I think it is that kind of idea which lies at the back of the paragraph in the memorandum from which I so strongly dissented. But I have had some practical experience in my work in South London, and I should say that I do not think that this problem of artificial restriction is presented to any great extent. There the problem is not the prevention of conception, but it is the prevention of birth and the destruction of unborn infants. I do not want to use exaggerated expressions, but I think that this is one of the most urgent, one of the most difficult evils to meet, and one of the most alarming features of the life of the people. It seems to me to betray instincts which are worse than savage, an absolute indifference to the destruction of unborn life. And because that is regarded as normal amongst certain classes of the population, they do not worry about the prevention of conception. That experience is further supported by what has been represented to me quite on their own initiative by one or two of the medical officers and important people at our hospitals.

Monsignor Brown. That is early abortion, is it?—*A.* Yes. They are quite reckless.

The Chairman. Can you tell us what arguments you used in objecting to that particular paragraph?—*A.* Well, putting it quite shortly, the reason was that I hold that if you relax the idea that intercourse has any other purpose ultimately behind it except the production of children, it seems to me that you open the door to a lowering of the whole idea of the union between the man and the woman, and you lower the whole idea of the intercourse itself; and also it seems to me that you destroy what I think is

so important to build up, the idea that this union is a perfectly natural process. I have never been able to modify the view that the only thing that justifies ultimately the intercourse between the man and the woman is the purpose and the desire to have children.

MONSIGNOR BROWN. Then, the end being secured by conception, would you say that intercourse was unlawful until it was necessary for another conception?—*A.* I disapprove entirely of intercourse if there is any other motive.

MR. MARCHANT. Must it cease after the possibility of birth of children? After the natural period of child-bearing must it cease?—*A.* I should say so. I think that if you open the door to other motives, you are bound little by little to give the whole situation away.

Q. St. Augustine puts it on two lines—the preservation of chastity and procreation of children. You would not agree to the former?—*A.* I do not think I should, if St. Augustine had in mind what we are considering, because the tricks which your conscience can play with you in regard to this preservation of chastity are so subtle that I would sooner limit it to just the one purpose. I think if we are going to the Fathers and schoolmen I have Thomas Aquinas on my side. Moreover, I am doubtful whether St. Augustine's phrase necessarily implies two separate purposes.

THE CHAIRMAN. Supposing a young man were to come to you and say his doctor had told him that his wife ought not to have another child for three years—say they were normal young people, deeply attached to each other—and they said that they felt that to live apart would be unnatural and unwholesome to both, and to a certain extent it would interfere with their mutual love, that it would make their married life less perfect; and that he said, further, that they did not regard it as self-indulgence, but as the God-ordained sacrament of married life—what answer would you give?—*A.* I say if it is quite clearly prescribed and is the right thing for the wife's health, according to my view I should say that, however difficult it may be, the strength and the grace will be given to do the right thing; and that so far as impairing the love between the two and the sense of union, surely the mutual sense of self-control exercised for the sake of the wife's health and what is best for her, seems to me to be just as sure a guarantee for preserving her confidence and her respect, as well as her love.

Q. Dr. Fremantle wants us to ask you: Are you against

preventives of all kinds under all conditions?—*A.* Yes. All the Bishops are absolutely agreed about that.

Q. Dr. Fremantle goes on to say: If he says, "Yes," ask him if he is in favour of unlimited families, regardless of means. If he says, "No," ask how they are to restrict the size of families after marriage. If he says, "By abstinence," ask why only the poor should be deprived of the sexual side of marriage, which is a principal object of the rite, according to our Prayer Book. If he says, "By confining connection to the mid-monthly period," ask what the passionate-natured persons are to do if this fails to prevent pregnancy. My point is that even the most rigid moralists must allow exemptions; and the question is, who is to give such exemption and under what limitations?—*A.* The Bishops' pamphlet with regard to those exceptions says that in certain cases only the parties' own judgment and conscience can settle. It was said to be a safeguard, it was not merely a sort of general direction as to restriction to certain times at which it is less likely to lead to conception, that that was allowable for every one under all circumstances.

Q. I think the real difficulty arises in quite understanding why you regard what is really a law of nature as a thing of which advantage ought not to be taken?—*A.* Well, I am not a physiologist, but I have always imagined that those periods at which it seems less likely conception will take place exist in the life of a human being by way of preparation for a time at which conception would be more likely, and that, therefore, you are using that period of time for quite a wrong purpose.

Mr. Hobson. I should like to ask you, my lord, whether you have considered the effect of a practically unlimited output of children upon the population of this or any other country; whether you have considered the social economic effects of unlimited families either from the standpoint of the family income or the standpoint of the material support of the nation, or any of those standpoints?—*A.* Very much. I believe it to be necessary to teach self-restraint and what I should call the absence of reckless extravagance in that department of life as in any other department of life; just as you would, I presume, tell people who could not afford it that they must not launch out into buying all sorts of things if they cannot afford them, so you must not launch out into having children if you cannot afford it.

Q. Would you regard that argument as efficacious, taking the working-classes as a whole, amongst any appreciable percentage?—*A.* I dare say it would not be as things are.

Q. The housing conditions, for instance, of a very large section of the working-classes are such as impose upon parents greater sacrifices in the way of self-restraint than amongst the well-to-do classes, and yet they are the people who by education and training have less practice in the exercise of the will?—*A.* That is why I should urge very strongly that we must both take the rigid line, and at the same time work by all means to improve the housing of the working-classes; but I should not take a lower line and say, "These people live in such ill-favoured conditions, therefore you must have a less rigid rule of life for them"; for in that way you would impair the motive of improving their conditions of life.

Q. But until that education is effective you will have a greater proportion of practically unlimited quantities of children produced from the class of parents who are less amenable to these motives?—*A.* Yes, very likely.

Q. You would have a moral depreciation of the mass, *prima facie*, in the next generation, the next generation consisting far more largely of the children of these parents who are themselves less susceptible to these higher motives and less calculated to bring up their children susceptible to these higher motives. It seems on the face of it as if that were a method of moral depreciation as regards the average of the next generation?—*A.* I think that is quite true; I mean to say that I have reckoned with that always, but I am prepared to face that.

Mr. Marchant. That we should probably have a larger proportion of undesirables in consequence?—*A.* I do not think that you could have a larger proportion than you have at present.

Monsignor Brown. Is not the Bishops' evidence rather that the very undesirable class are aborting at such a rate that they must be keeping themselves under?

Mr. Hobson. Assuming that the educative motives were not operative in checking the rate of intercourse, whether she could afford it or not, the woman might have a child every year?—*A.* Yes. I think myself that we do not quite take sufficiently into account the operation in those classes of society and the conditions in which they live, of the influence of a little better standard, and a little better public opinion gradually established amongst them. My impression is that you have what you might call the absolutely hardened who are not going to be touched by anything; but there is a large class of our population who just drift along and are more or less the victims of any

kind of standard or fashion that happens to be in vogue; amongst them, if you get a little leaven of a better standard of education it does begin to tell.

MONSIGNOR BROWN. In the direction of restricting?—*A.* The application of that was this: Supposing in this stratum there were those to whom you could appeal and who have a better sense of their own responsibilities; supposing you had been enabled also at the same time to improve the conditions under which they live, and they had responded to education, the standard which they hold up by their talk and life and ways of living, I think, does tell more than we are apt to think.

MR. MARCHANT. They are influenced by the social opinion?—*A.* Social opinion. If you had two or three good mothers, good households, that are getting on to the level I want to see, I am, I know, more sanguine about the effect of that than some people are.

MR. HOBSON. The other restrictive habits have spread themselves, we know, of course, very largely from one person to another, through example and conversation. The question is whether this method of moral abstention, being less public in its character and probably not being so freely talked about, would have an adequate counteracting influence on the other?—*A.* I think that it takes longer; but the mysterious thing about good and evil is that evil appears to be more infectious than goodness.

Q. That is the whole issue, is it not?—*A.* Yes. But I do believe in the ultimate victory of goodness.

MR. MARCHANT. What do you think is the motive for frequent abortion in the mind of the woman?—*A.* I think partly to save themselves from the trouble; they think that there will be less trouble than in the trouble of child-bearing; and sometimes it is also to escape from having more children—they cannot afford it.

Q. Then it would be better for them to practise prevention than abortion?—*A.* You mean physiologically?

Q. Yes; and in every way?—*A.* I do not know; but from what doctors tell me I should not have thought that the dangers are so serious immediately; but I understand that the habitual practice of prevention produces ultimately nervous diseases and disorders of a very serious kind.

DR. SCHARLIEB. I think they are both very deleterious. I think that both prevention of conception and also the procuring of abortion are extremely serious physically. I quite agree that if a woman is perpetually thwarted in her desire for children, if prevention is carried out, they very

often become nervous wrecks between the ages of forty and fifty; also I think the procuring of abortion in the later stages is very often tantamount to murder. I do not know which to reprobate most, physically.

Monsignor Brown. Do you think a working-man's wife, supposing her husband went in for methods of interrupting the intercourse, would seriously remonstrate because it would seriously affect her health in fifteen or twenty years' time?—*A.* I do not think it is any use appealing to fear at all.

Mr. Hobson. It is your general experience, my lord, that there is amongst the working-classes, so far as you can judge, a larger amount of abortion than the use of anti-conceptions?—*A.* Yes, in my part of the world.

Monsignor Brown. What you say seems to point to the fact that they say, "Yes, abortion, plenty of it; prevention, practically none of it"?—*A.* That is what I should say.

Mr. Hobson. Would not there be a larger proportion of abortions that would come under the notice of medical men and women?

Dr. Scharlieb. They say that there are five abortions to every one live birth. They take diachylon pills and procure it themselves without the intervention of any doctor or quack. Of course, no decent doctor would do it.

The Witness. Doctors have told me that many patients manifestly at some time or another of their lives had procured abortions.

Monsignor Brown. Perhaps before marriage?—*A.* Very likely. But I was going to say this, that it may be possible, I think it is quite conceivable, that there is a good deal of use of preventive means amongst young boys and girls. Shops that choose to advertise such things become perfectly well known to these young people. But amongst married poor people, which I thought was the question, I should say that abortion is extraordinarily rife, and that prevention is almost negligible.

Q. May I put this? You get any amount of cases round about where you live of working-class people who have two or three children in the first years of marriage, who live together and, as far as any one can judge, cohabit, but who after that have no more children?—*A.* Yes.

Q. I do not think that they use mechanical preventives; we have had one or two gynecologists here who have said that it is practically out of the question for the working-classes to use them; but that the interruption of the inter-

course is not practised even amongst the lower working-classes frankly I do not believe?—*A.* I think that a good many of our workers would be able to give an opinion from what people had actually told them. So that supposing some used means of prevention, or means which they think will prevent, I am quite certain our workers would get to know of it.

Q. An appliance?—*A.* No, not an appliance, but what you might call "dodges." I have never questioned them very closely upon that, because the thing I have been most alarmed about is this indifference to abortion. I have not gone into that other with them.

The Chairman. There is a mass of evidence about that in the eugenic books dealing with counties north of the Humber, where it exists to a great extent.

Mr. Marchant. They would do it by knitting-needles, or diachylon pills.

The Witness. You mean procuring abortion?

Mr. Marchant. Yes.

Principal Garvie. I mean preventives; are they widely advertised in a district like that you referred to?

Mrs. Bramwell Booth. I do not think they use those things amongst the very poor at all?—*A.* I think that the real question is whether they have other dodges than the well-known appliances.

Monsignor Brown. The almost universal thing in France that all religious workers get up against is the *coitus interruptus*, which is a common thing all over the world, and that England is any exception to it I frankly do not believe.—*A.* I quite agree with you.

Q. But to get evidence of that is a very much more difficult thing than to get evidence of the woman procuring abortion?—*A.* Quite. I know in some districts in South London they take lead pills.

Mrs. Bramwell Booth. Do you not think that amongst the middle classes the question of economy enters far too largely into the idea of limiting of families, and that parents always want their children to start in the same position to which they have themselves attained, and are unwilling that they should begin on any lower scale? Do you not think that that idea is largely conducive to this decline of the birth-rate?—*A.* I think when you come to the classes of society that have begun to taste some of the so-called "sweets of comfort," it is that motive, selfishness, that leads more than anything else to the employment of preventives.

Q. Do you not think that it enters too largely into their ideas?—*A.* Much.

Q. To say that they can only bring up three children, which is not enough to ensure the continuance of the race, that that is a wrong motive and a wrong idea; that they ought to be willing for their children to begin life in a lower situation and be earners?—*A.* Quite. I think that the idea runs right through that the child must necessarily begin where his father leaves off; and the alarming conclusion is, that the classes of society that have got on best and been most successful materially in life are just those who from these motives, what they call prudence, but what I should call selfishness, decline to have children.

Dr. Scharlieb. Do you not think, my lord, that those people who limit their families ought not only to remember what is right, which is quite the best motive of all, but in addition to that if they remembered that the woman's fertility declines from twenty-five years of age on, we may be sure that the majority of them would not have more than six children, and families of more than eight would be extremely rare. Of course, you do occasionally hear of very large families, but they are people gifted with an abnormal fertility. I think the average people if they allowed Nature to take her own absolute course would have six to eight children, even if married early in life; but if people married at thirty they are not at all likely to have more than four, or at the most five.

Mr. Hobson. Born or surviving?

Dr. Scharlieb. Born. What do you think? You know more about the statistics than I do?

Mr. Hobson. No, I do not think I do.

Dr. Scharlieb. Being a woman myself, I can ask the woman whether she has practised restriction, or anything of that kind; and I also ask how many children have been born alive, and how many miscarriages, and I do find that even those women who do not interfere with Nature do not get such enormous families; I think they might be reassured, if they thought there would not be twelve or fifteen.

Monsignor Brown. Might I ask you, my lord, what advice you would urge the Clergy to give in the case of a woman whose husband persisted in anti-conceptional practices; should they have marital relations?—*A.* I think I should agree with what is put in this memorandum to which we have already referred.

Q. Is not that as much a weakening of principle as the other thing?—*A.* I should not have thought as much. I

should urge the woman to bring all the means that she could to bear upon him.

Q. Say the man will not see you, and you have to deal with the woman. That is the case all through France. The case with the anti-clergy is a "marriage bed quarrel;" putting it rather brutally, that is what it is. Would you say to the woman, "You may submit," or "You must refuse"; because that is the acute case of conscience that you get?—*A.* I would much prefer to say that she should refuse for her own sake and for the sake of the man; but if it became quite impossible—if it is a case of cruelty, or anything like that, I think I should advise her to leave him.

Q. That is a terrible suggestion to make to an average woman, and perhaps she has no money, and if she leaves him voluntarily she has no redress—and perhaps, also, she has children. That is the serious, acute thing one has to face in dealing with the individual.

Mr. Marchant. Do you think in these cases the Church of England might give more, shall I say, open public guidance on these matters nowadays, seeing that the evil is not hidden and is a public evil?—*A.* You mean, make a sort of pronouncement?

Q. In some way, so that the general population should be better instructed in these matters?

Principal Garvie. My lord, the position you adopt is not one that is held by the Bishops as a body; they have not committed themselves.—*A.* No.

Q. What I was going to put was this: I suppose one can take for granted that in common opinion and common experience married couples often feel that this act is an expression of their mutual affection, and that possibly in some cases although they do not desire in any way to prevent children being born, yet probably mutual affection may be a higher motive than the desire to have children; that is quite possible; would you say that these feelings are illusive feelings contrary to the intentions of the Creator, and the only thing that justifies the act is the intention to have children?—*A.* The intention, or the desire, that is the view I take.

Q. Then it is a considerable reversal of moral judgment. One would like to know what authority lies behind it except the authority of a new conscience. Can it be proved from Scripture; can it be proved from the great moral teachings of the Christian Churches as a whole, that that is the correct view?—*A.* I am certainly not going to dogmatize, but I have never been convinced that it is possible to state a case

for any other motive really as a practical thing that will work out morally in practice.

Q. Then you would say that the expression of mutual affection of husband and wife is not a worthy motive?—*A.* Certainly it is; but I believe it to be extraordinarily dangerous to say that that is the principal form which mutual affection and respect are to take.

Q. Frankly to me it seems that your position is the lower moral position, because the husband towards the wife, and the wife towards the husband, only as a means towards an end, a means towards having children?—*A.* But that is not the only relation which exists between them.

Q. No; but in that relation, if the sole legitimate motive is the having of children, then the husband is treating his wife only as a means towards motherhood, and the wife allows her husband to be only a means towards fatherhood? —*A.* He is not using her, she is using him just as much; it is a union which exists in that form by a great mystery, for the continuance of the human race.

Q. It seems to me to be the most serious problem we have to face almost. Is not there behind you a point of view, a survival of the notion that there is something improper and impure about the sexual relation, that it is only a mysterious dispensation of the Divine Providence that somehow by allowing it to be the means of procreation of children saves it from the impropriety that attaches to it?—*A.* I regard it as a perfectly natural thing which has a perfectly natural object about it; a perfectly natural process by which alone the human race is continued. That is the τέλος of this particular union.

Mr. Hobson. But must it necessarily be a conscious τέλος in the mind of the man and woman when having intercourse? In the case of the lower animals it is ruled out; they do not know what the physical result of their act is likely to be. But you suggest that because men and women are alone in a position to know what the physiological result of their action may be, that they ought always at the time of their action to have that result in their consciousness?—*A.* Perhaps I should put it in this way, there ought not to be any other motive present; otherwise it reduces itself sooner or later quite certainly to mere gratification of animal instinct; you may call it the "expression of mutual affection," and all the rest of it, but it will become, I am quite certain, in practice merely self-gratification.

Monsignor Brown. But is that wrong?—*A.* I think it is.

Q. Wrong because of the pleasure that it gives?—*A.* Yes, because I believe it is a natural process designed for another purpose.

PROFESSOR GOLLANCZ. It might interest you to know that a well-known Jewish sage of the first century did not overlook this point, and although his utterance is somewhat cryptic and allegorical, I think it is rather telling and instructive. The Hebrew word for "man," he says, is *Ish*, and the Hebrew word for "woman" is *Isha*. The two letters which are common to both terms are *aleph* and *shin*, which, as a word, means "fire"; the two letters that are not common to both are *Yod* and *He*, making *Yah*, which means "God." The sage remarked that if the mutual relations between man and wife be proper, as they should be, then "God"—the Divine Presence—rests with them and their marriage; but if their motives were impure and improper, then married life becomes a "fire." I think that has something to do with the point that has been raised; I think that just tells us the Jewish view on the subject; that unless proceeding from the purest motive, married life simply becomes the devouring "fire," instead of its proving "The flame of God," which is the proper sort of marriage.

MONSIGNOR BROWN. How far does that take you, Professor Gollancz?

MR. MARCHANT. He is not the witness!

PROFESSOR GOLLANCZ. I am not! What I wish to emphasize is that the Jewish teaching did not overlook that point—I mean the higher aspect of marriage—two thousand years ago.

MR. MARCHANT. It has been, may I say, universally assumed that intercourse has its lawful place in married life, and is consecrated by the marriage vow, and that such intercourse need not necessarily have the one motive of parenthood, but it may have the pure object of mutual affection; now if, as you believe, intercourse is to be absolutely restricted to the single and occasional object of parenthood, are you not lowering and materializing marital relations? Are you not reducing these lawful relations to the standard and practice of the stock-yard? Are you not casting the slur of impurity upon them? On what biological, or moral, or religious facts is your belief founded? *A.* I am quite familiar with these questions; I have often talked about them with people who held that view.

Q. You think your own view is a higher?—*A.* I do not say that my own view is higher at all; far be it from me to say that any view I hold is higher than any one else's;

but I can only say that to me the other argument is quite unconvincing; I cannot follow in the least what that actual process—the act of intercourse—can mean at all beyond being the appointed means by which human life is carried on; all the rest seems to me to be the mere jugglery of words; and as I say, in practice if you begin to teach that to a rather less-educated, or less-intelligent set of the community, you will very soon find that they take advantage of it and say, "We are doing the higher thing," when they are doing very much the lower one.

MONSIGNOR BROWN. I am only speaking from our own point of view. We always say the primary end of marriage is the procreation of children, and that the secondary end is lawful so long as the primary end is not excluded. If it is to be laid down, above all for the ordinary uncultured, working-class that sexual intercourse except to procreate children is at all other times illicit, I think we have a terribly amazing proposition to put before them.—*A.* I do not see where you are going to draw the line. I do not see that there is any real difference between having intercourse with preventives or without them if you are going to teach those people to avoid the consequences, which is what we should be doing.

MRS. BRAMWELL BOOTH. This view is not supported by the Jewish regulations in the Old Testament; it does not seem to me that the Bible absolutely supports this view; it seems to lay down laws for moderation in all things?—*A.* Self-control?

Q. Yes. In the life of an ordinary healthy woman—because the women who have children every year are not healthy women, I think Mrs. Scharlieb would agree—an ordinary healthy woman would not have children every year because she would be unable to nurse her children. If healthy she ought not to conceive while she is nursing the children—so that any ordinary healthy woman to have a child oftener than every two years, and if she chooses to nurse the child longer than nine months or twelve months (which is possible for many to do)—she would not need to have children more than every three years; now, if your view is the right view it would mean that during the course of child-bearing years that the husband and wife would only have this mutual embrace say seven times or eight times, according to the number of children which they had. Nor after child-bearing age at all.—*A.* Well, what is the harm of that?

Q. Well, I do not know that there would be any harm in it, but I have never heard such a view of married life

entertained before, and it does seem to me that such a view is not entertained in Scripture?—*A.* I am afraid I could not answer that.

Mr. Marchant. Mrs. Booth thinks that neither the law nor the prophets uphold you.—*A.* I could not give the views I do if I thought that. Might I be allowed to add this: I think the mistake with all these questions is that we isolate them from the whole large problem of temperance and self-control; I prefer to take the very strict line, because I want to have temperance in all things, self-control, treated as a whole, as a religious question, including and going beyond the political or social problems presented; ultimately it comes to be a question of teaching people what their real self is, and how that self is to be adjusted.

The Witness then withdrew.

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